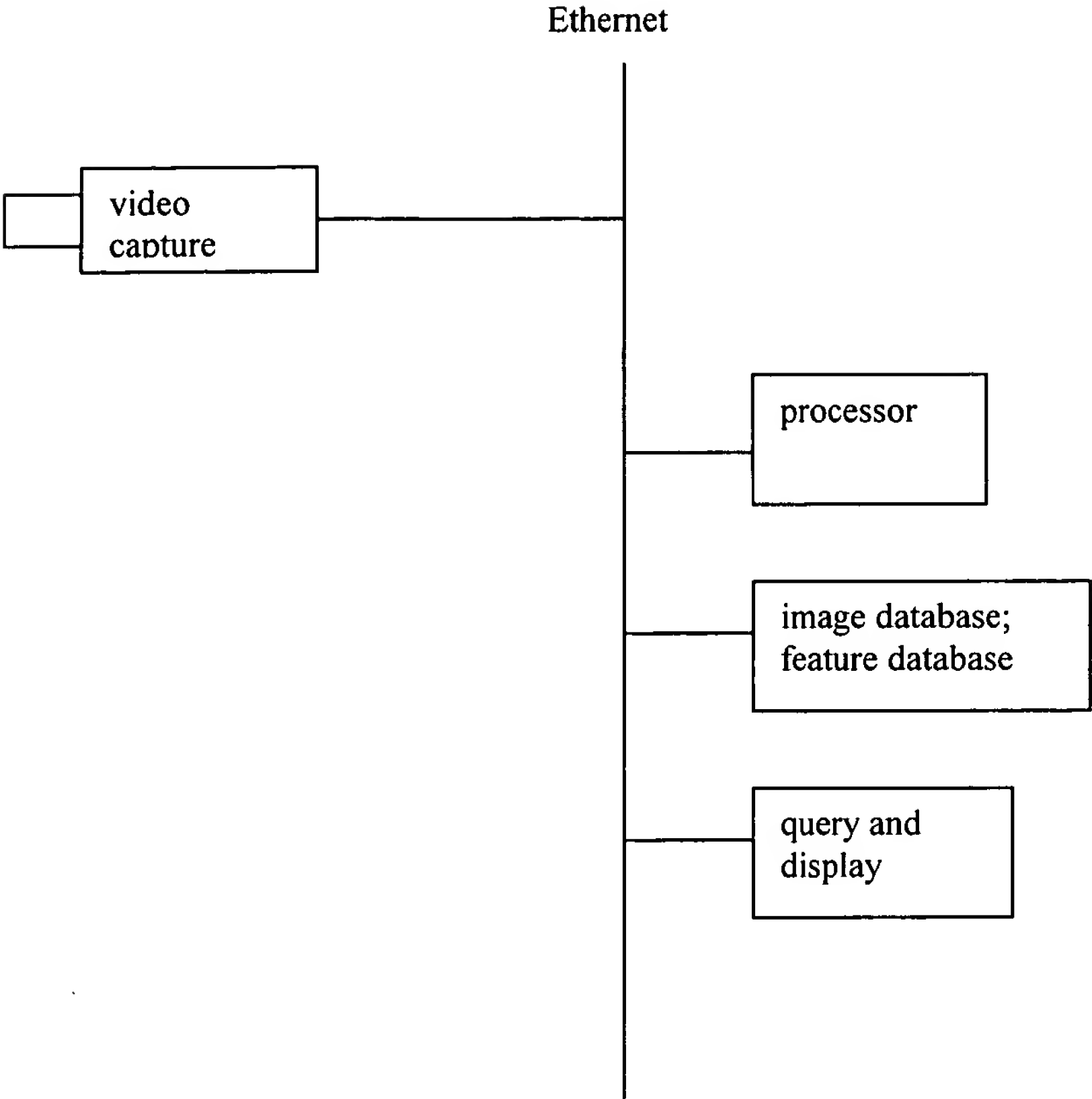


Figure 1



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Figure 2

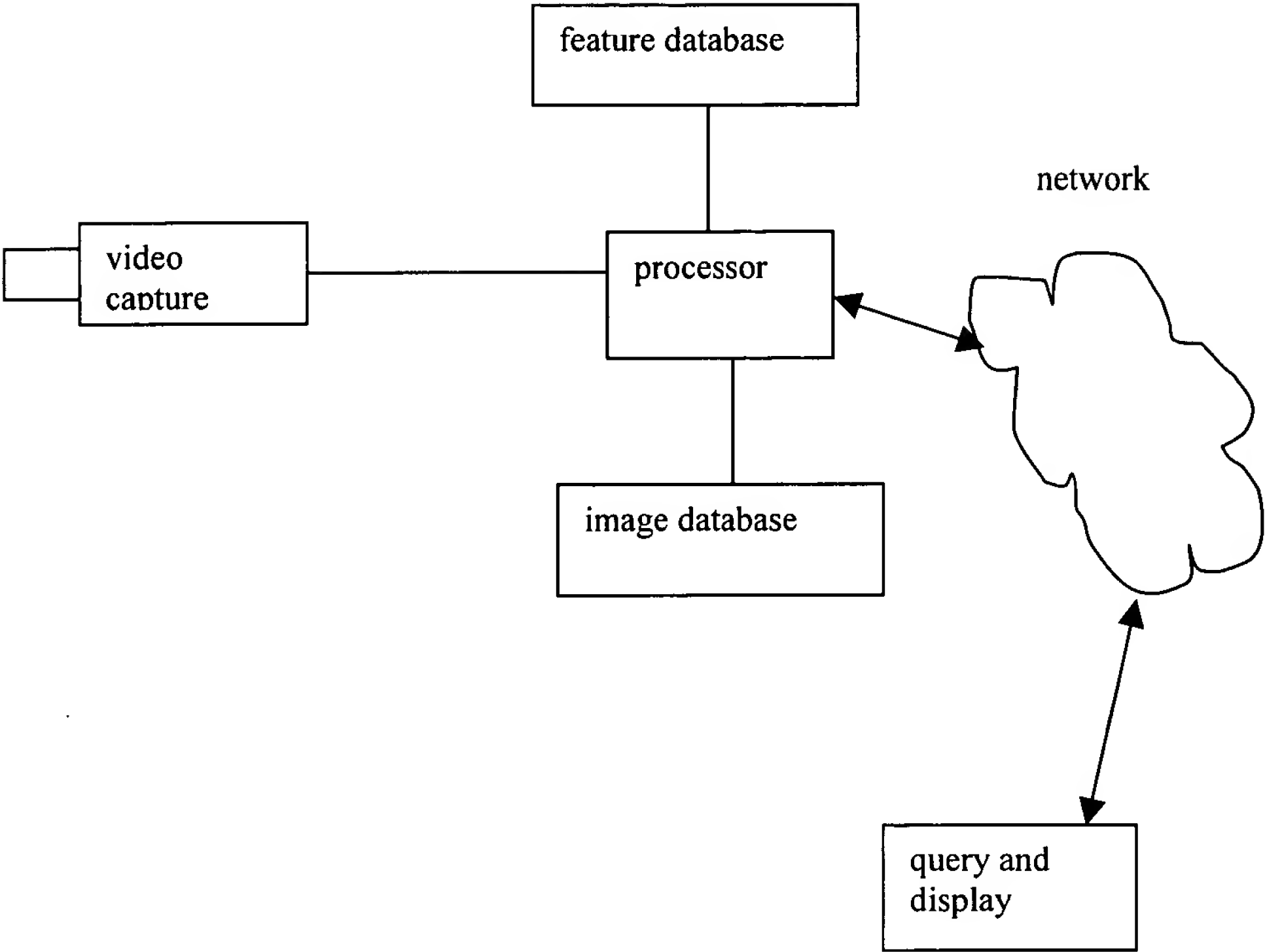


Figure 3

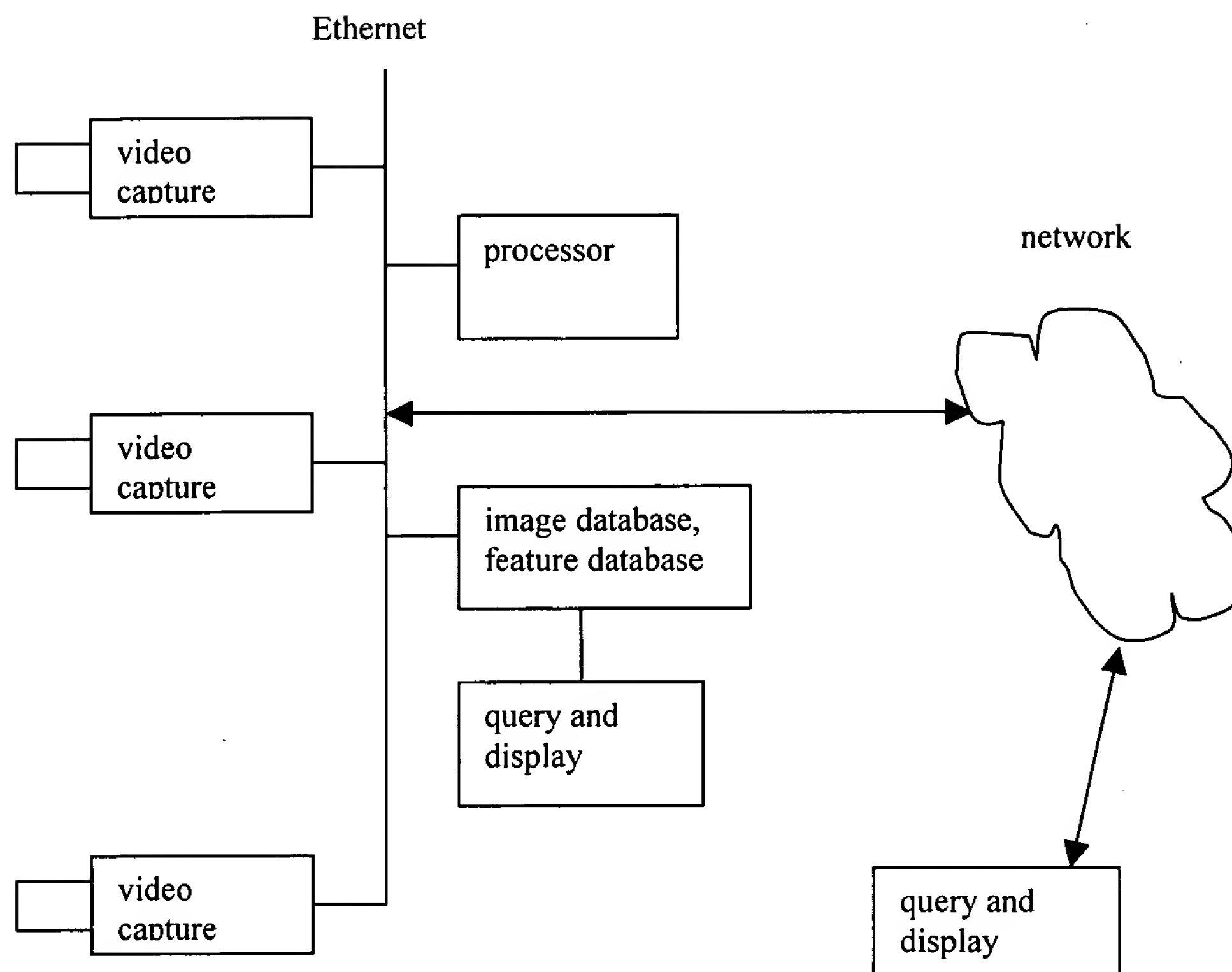
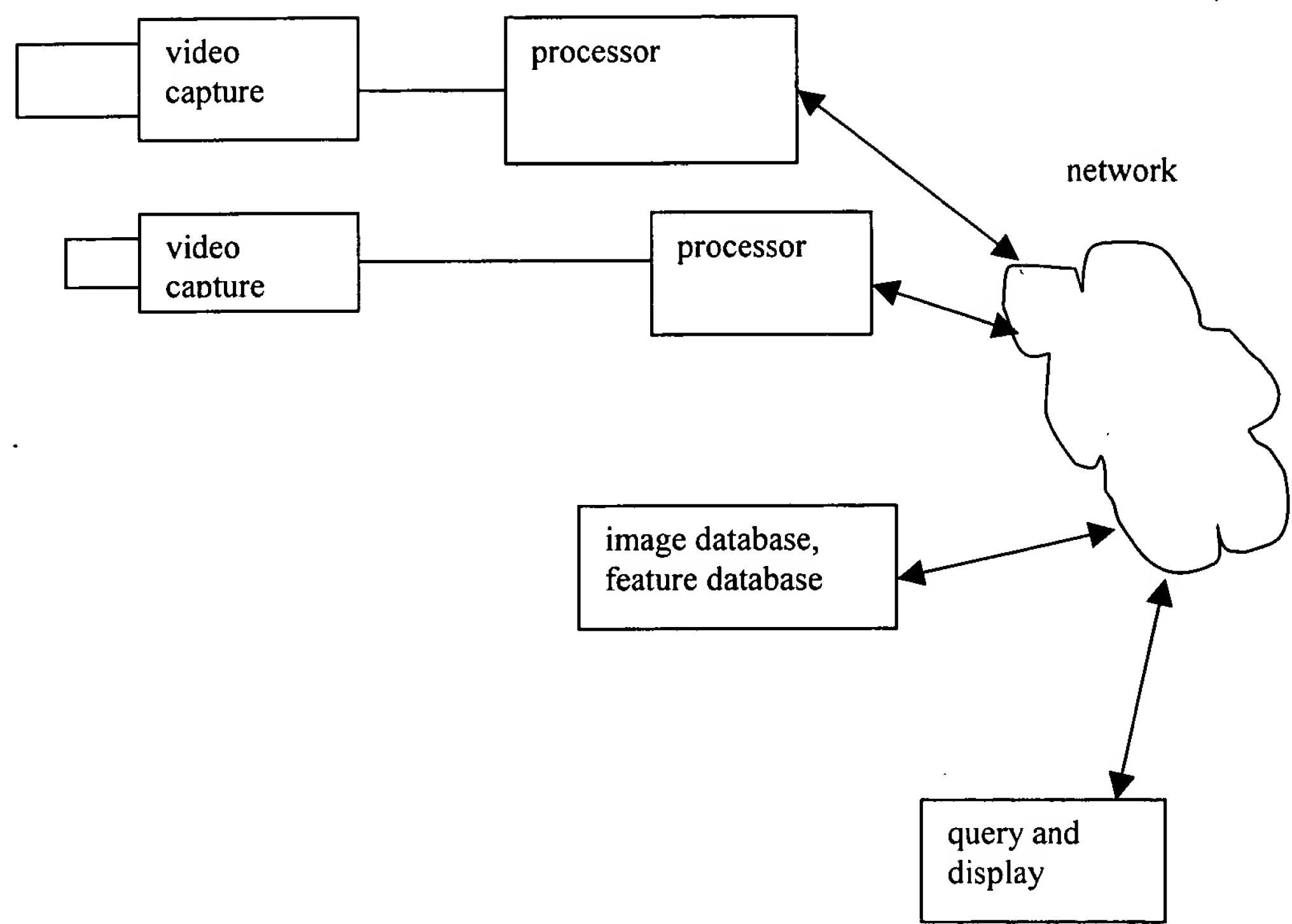


Figure 4



FOR RELEASE

Figures 5-35

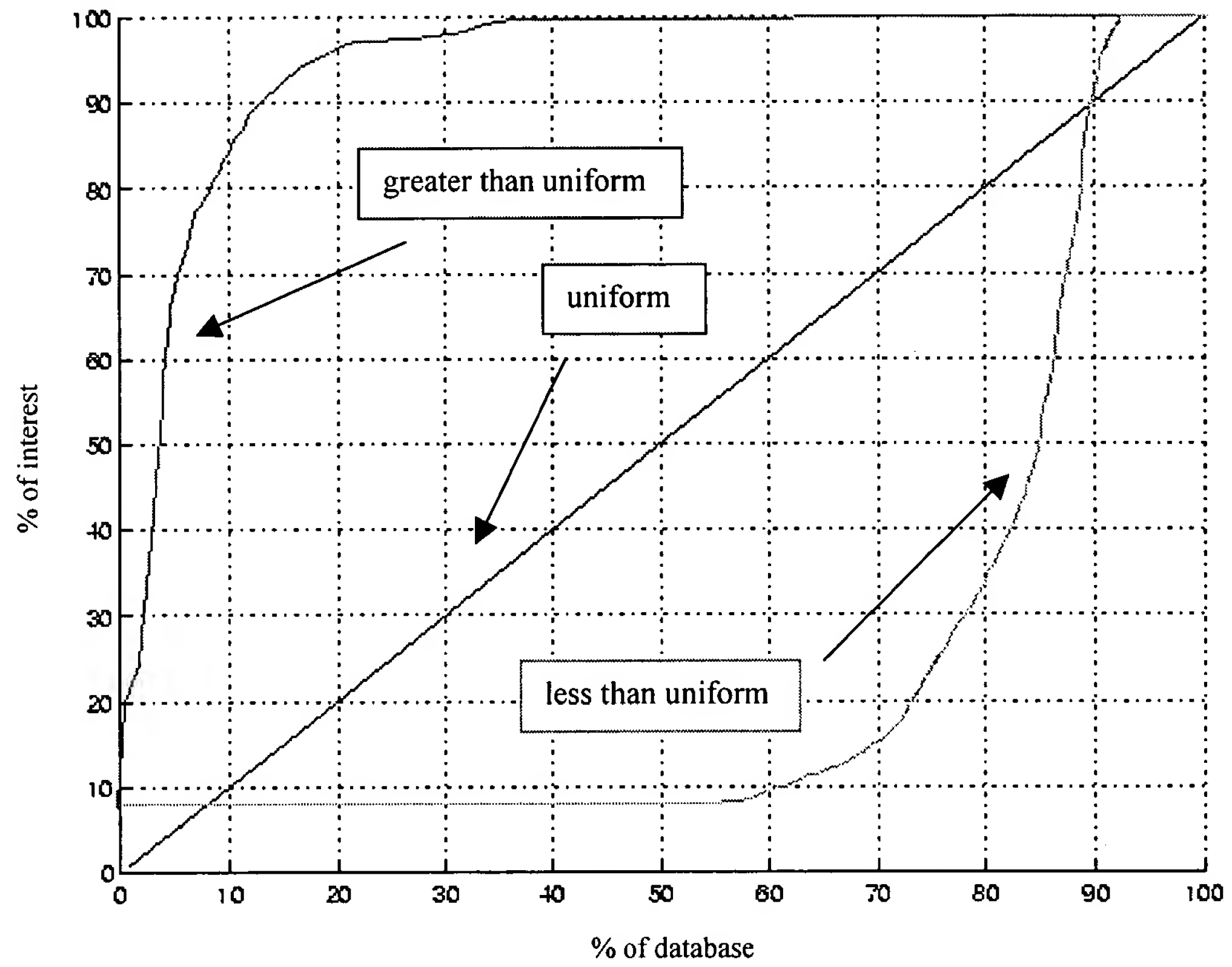


Figure 5: Efficiency plotted for three scenarios, better than random, random, and worse than random.



Figure 6: Vehicle traversing the field of view. The $m \times n = 10 \times 8$ grid partitions the image into 80 30×32 pixel grid blocks.



Figure 7: A person traversing the field of view. The $m \times n = 20 \times 15$ grid partitions the image into 300 16×16 pixel grid blocks.

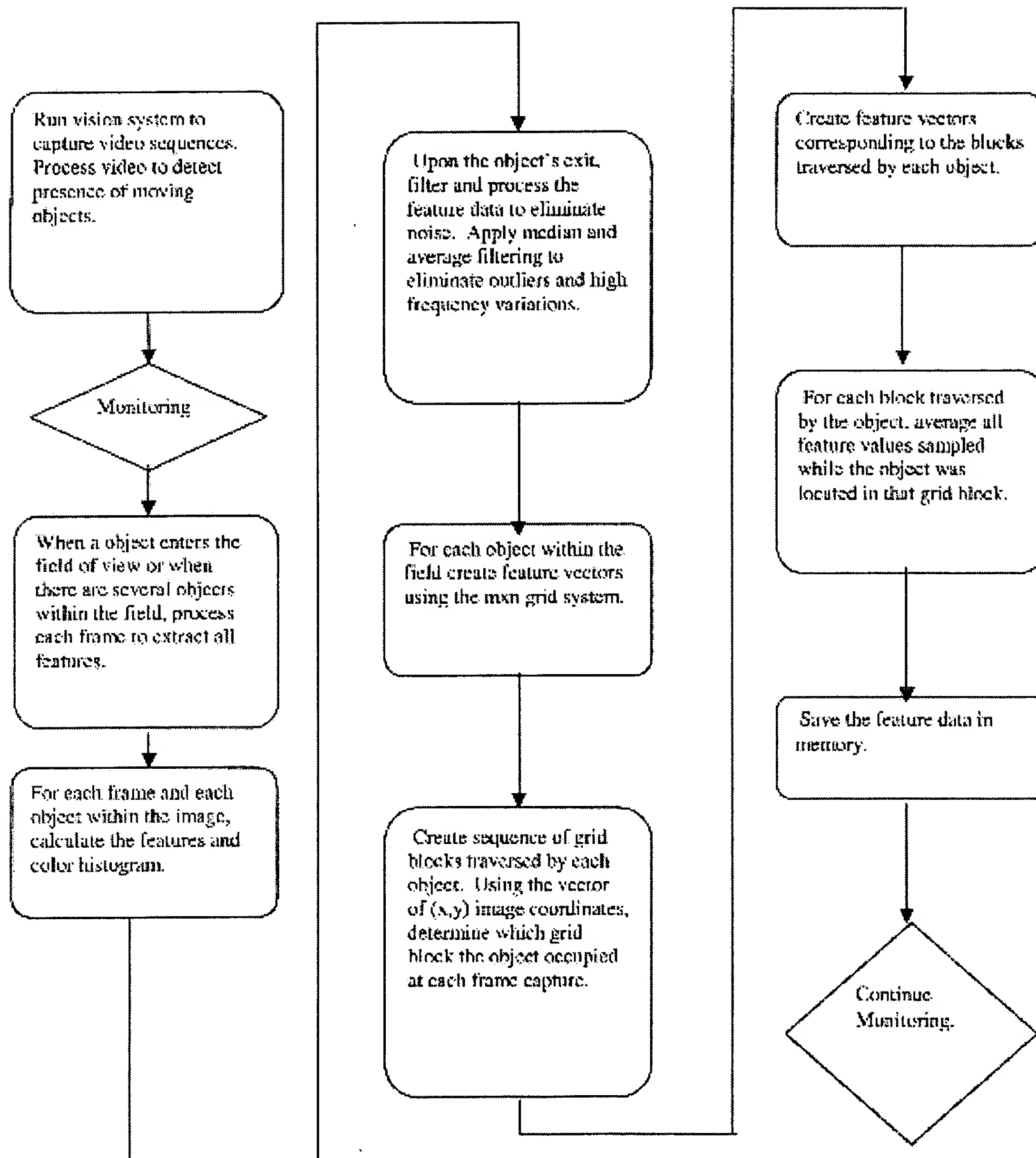


Figure 8: Feature generation software flow chart.

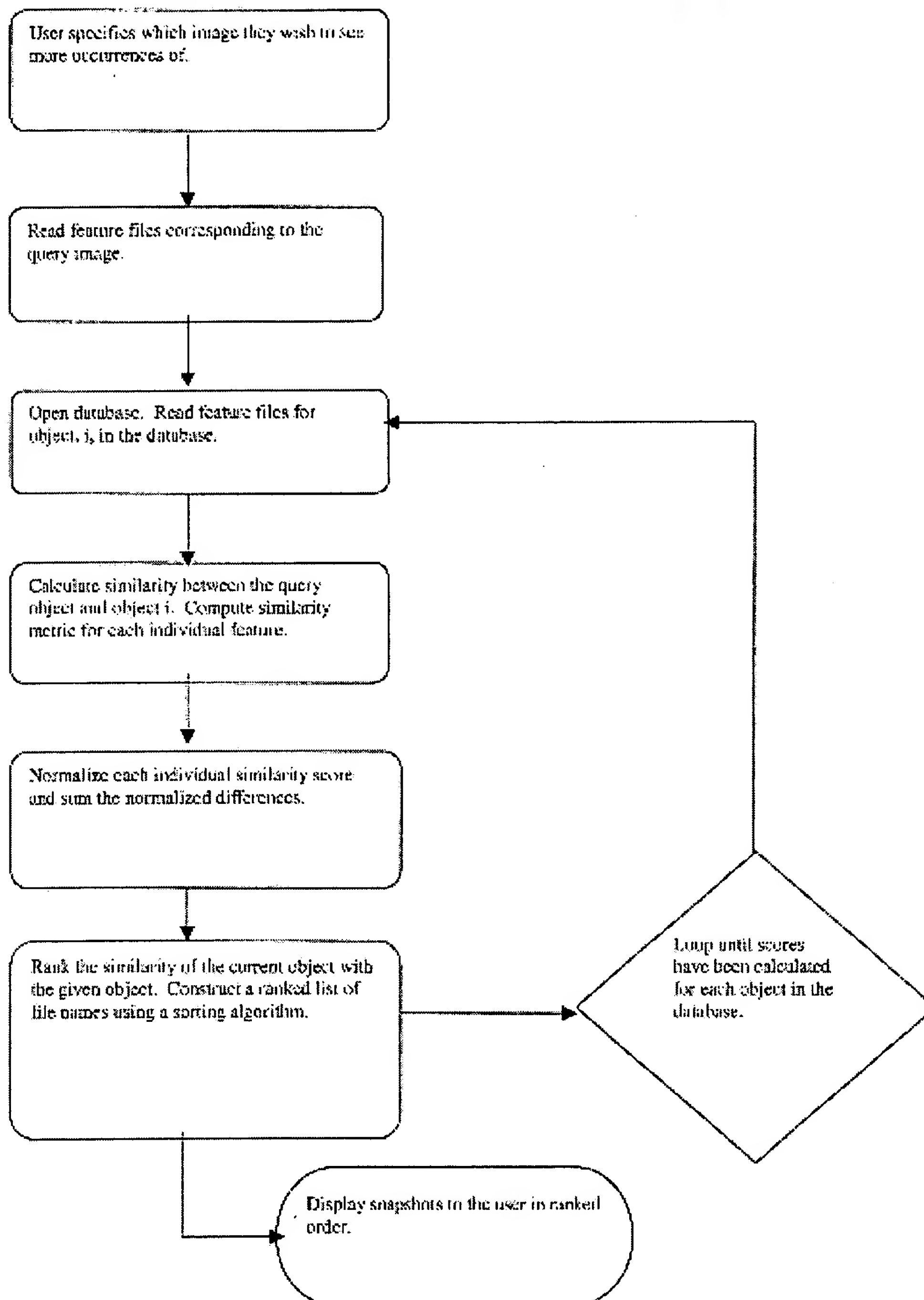


Figure 9: Image indexing software flow chart.

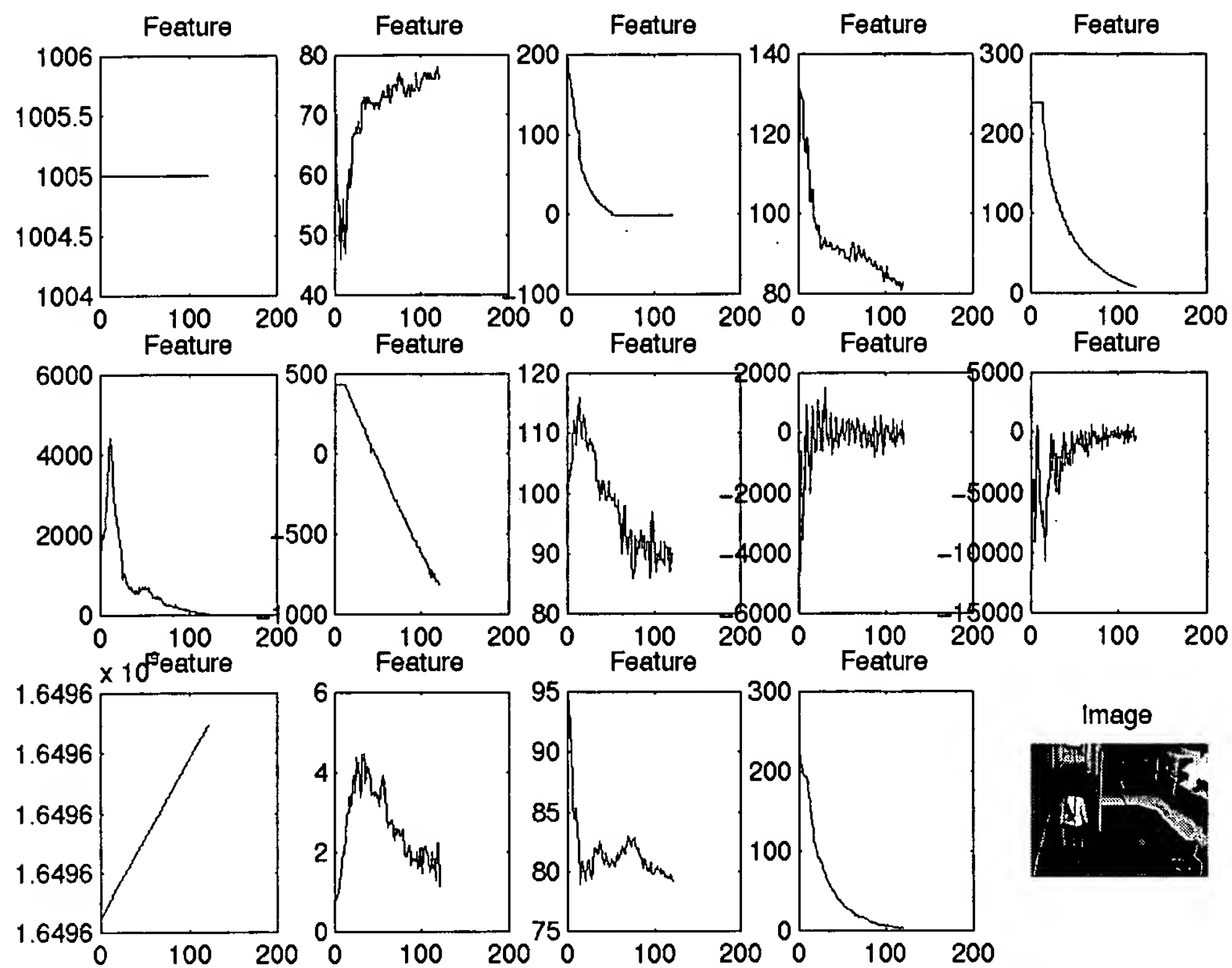


Figure 10 Feature plots verses position relative to the camera. The plots show features that do and do not depend on the object's position.

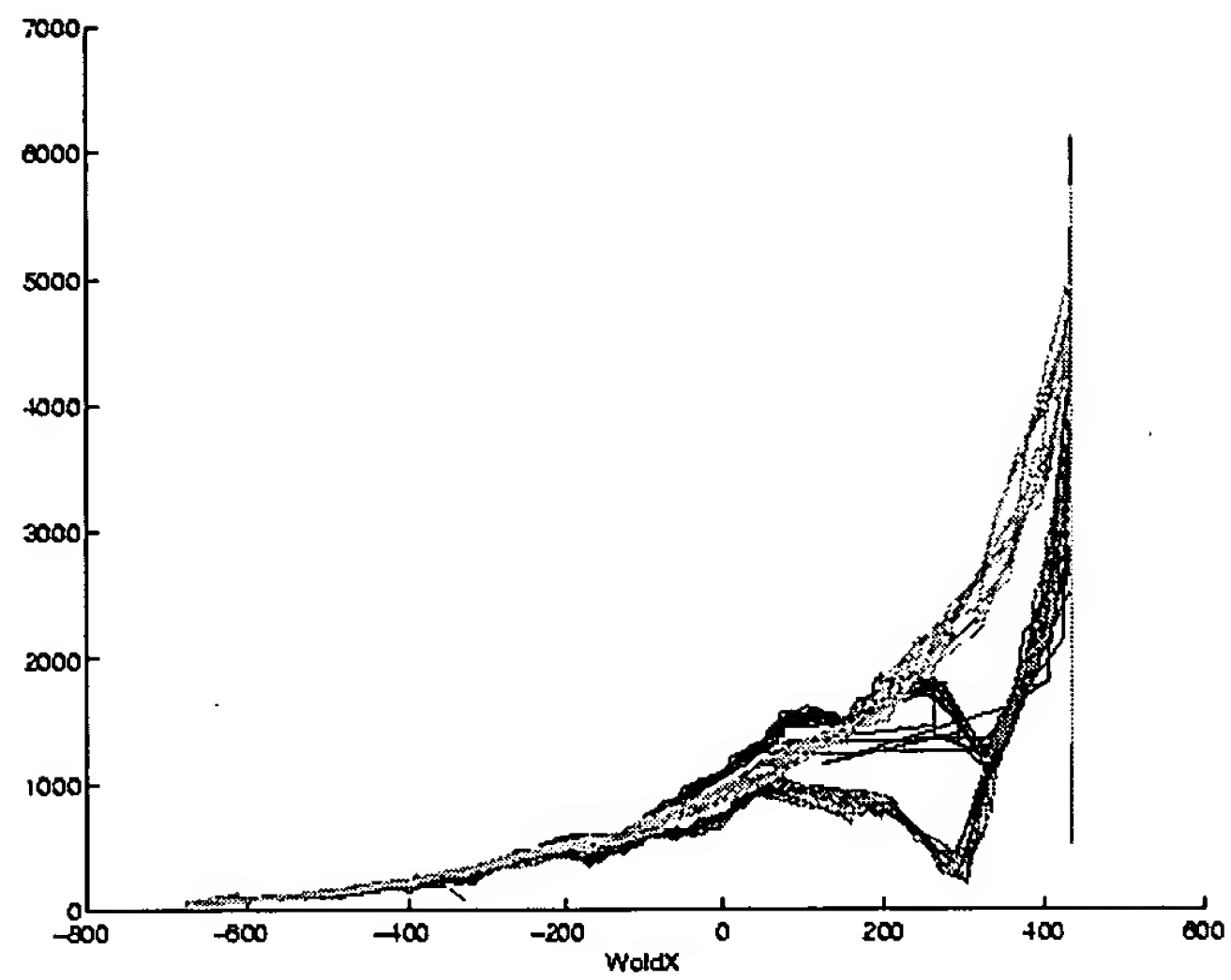


Figure 11 Feature5 verses position from camera. Each color represents a different individual.

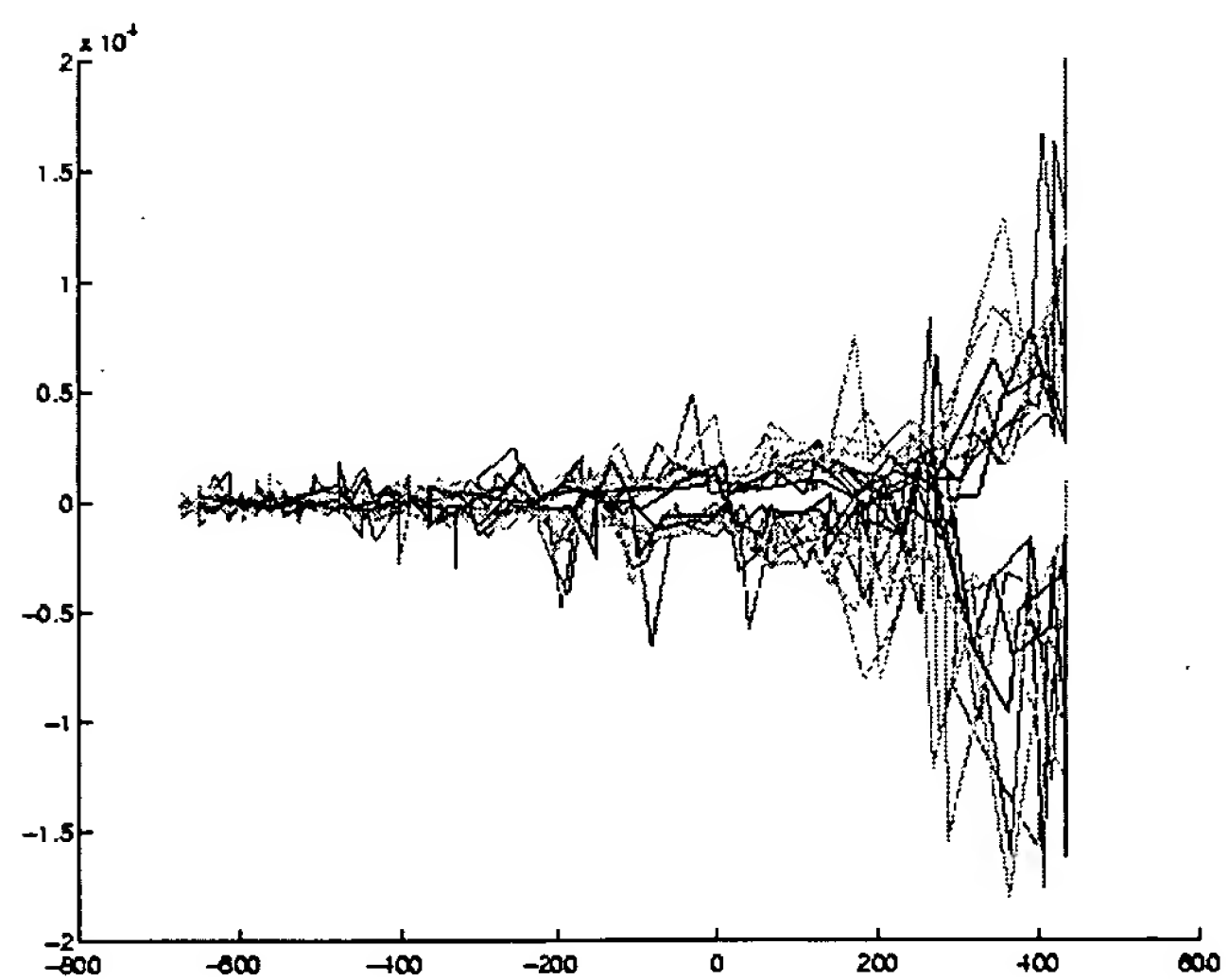


Figure 12 Feature3 verses position from camera. Each color represents a different individual.

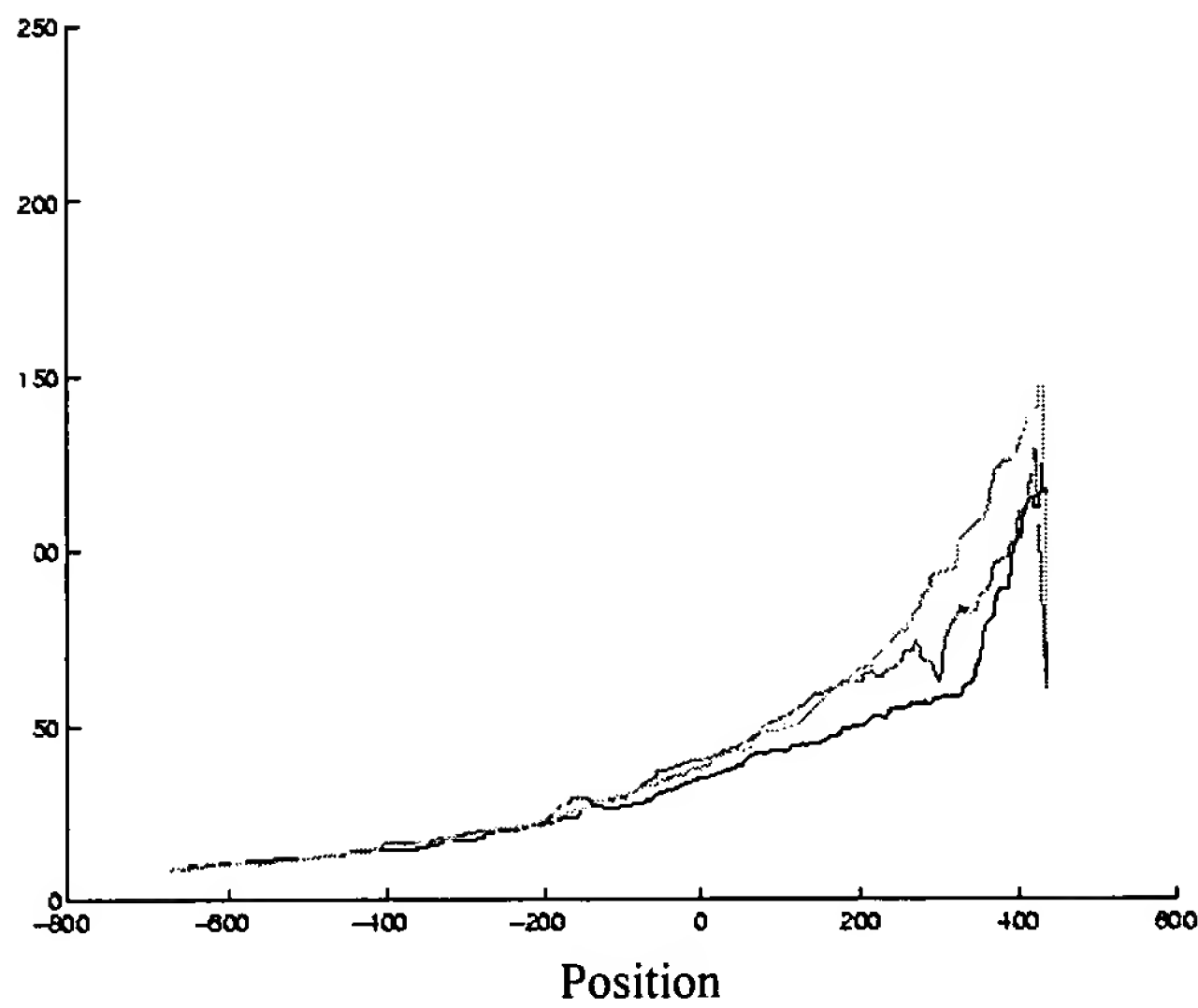


Figure 13 Feature5 verses position from camera for three objects. The curves in this plot result from applying a median and average filter to the data. Each color, except yellow, represents a different individual. The yellow curves represent the processed signal.

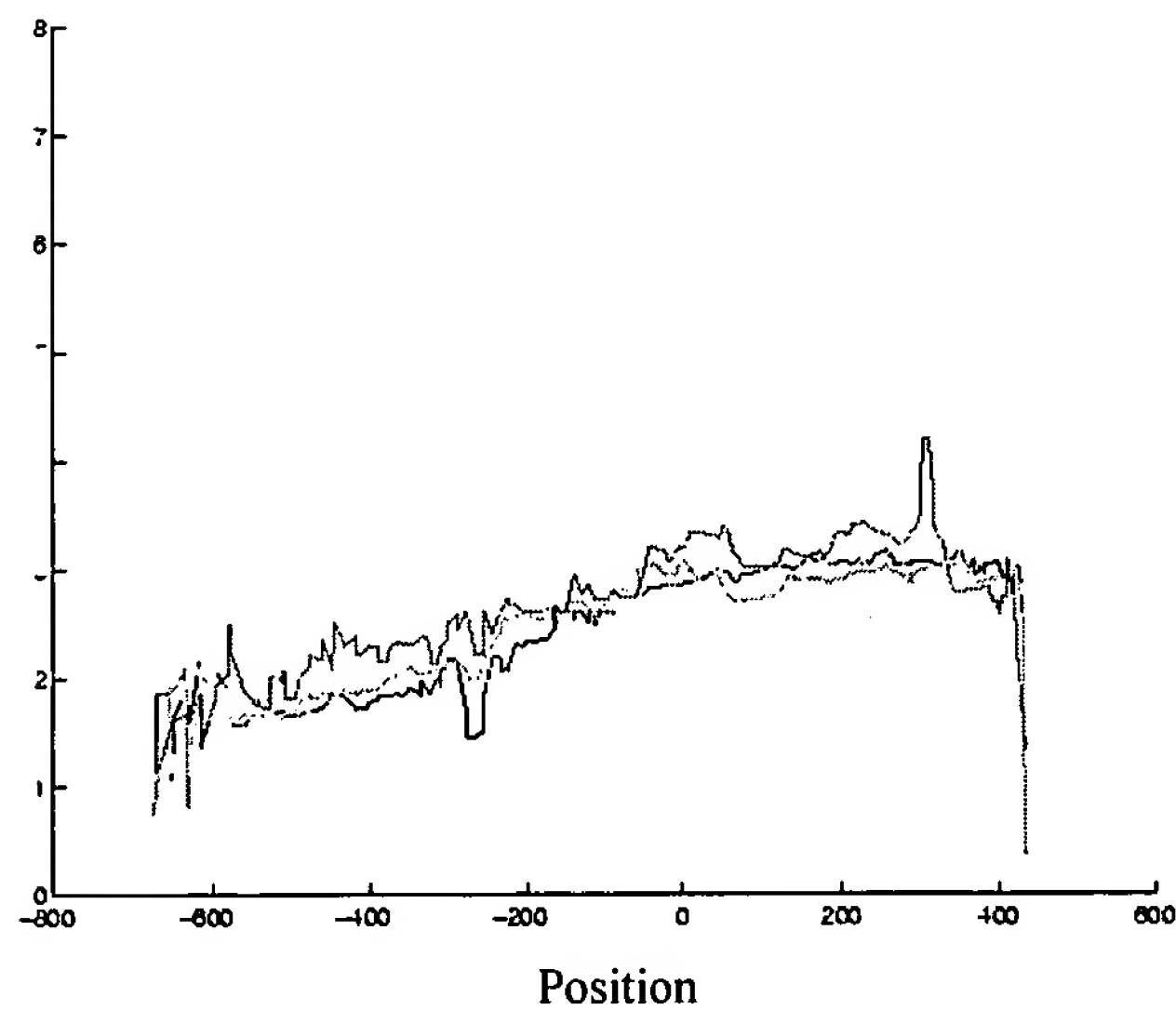


Figure 14 Feature3 verses position from camera. The curves in this plot result from applying a median and average filter to the data. Each color, except yellow, represents a different individual. The yellow curves represent the processed signal.

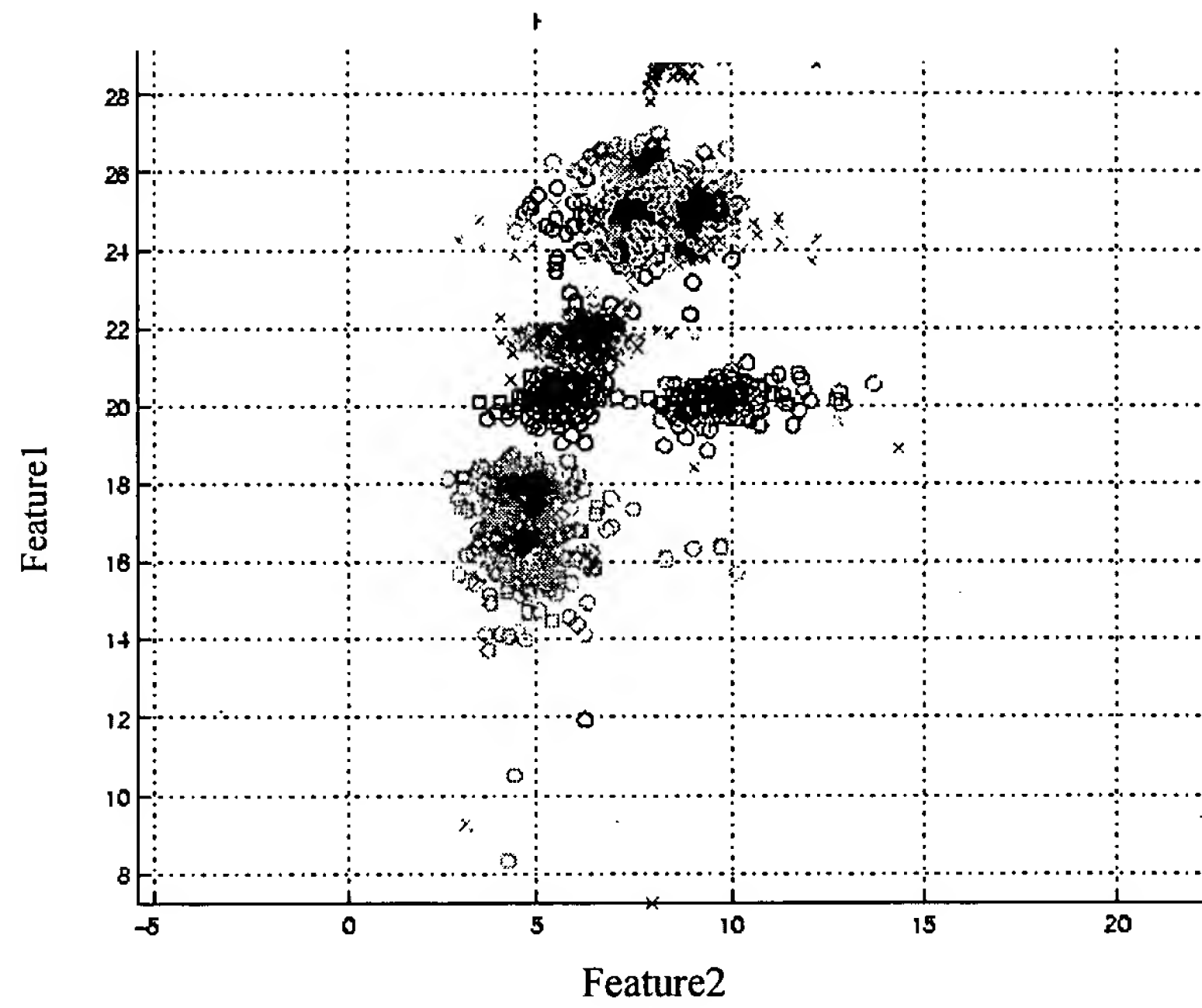


Figure 15: Feature1 and Feature2 clusters created by plotting every valid value extracted from each frame

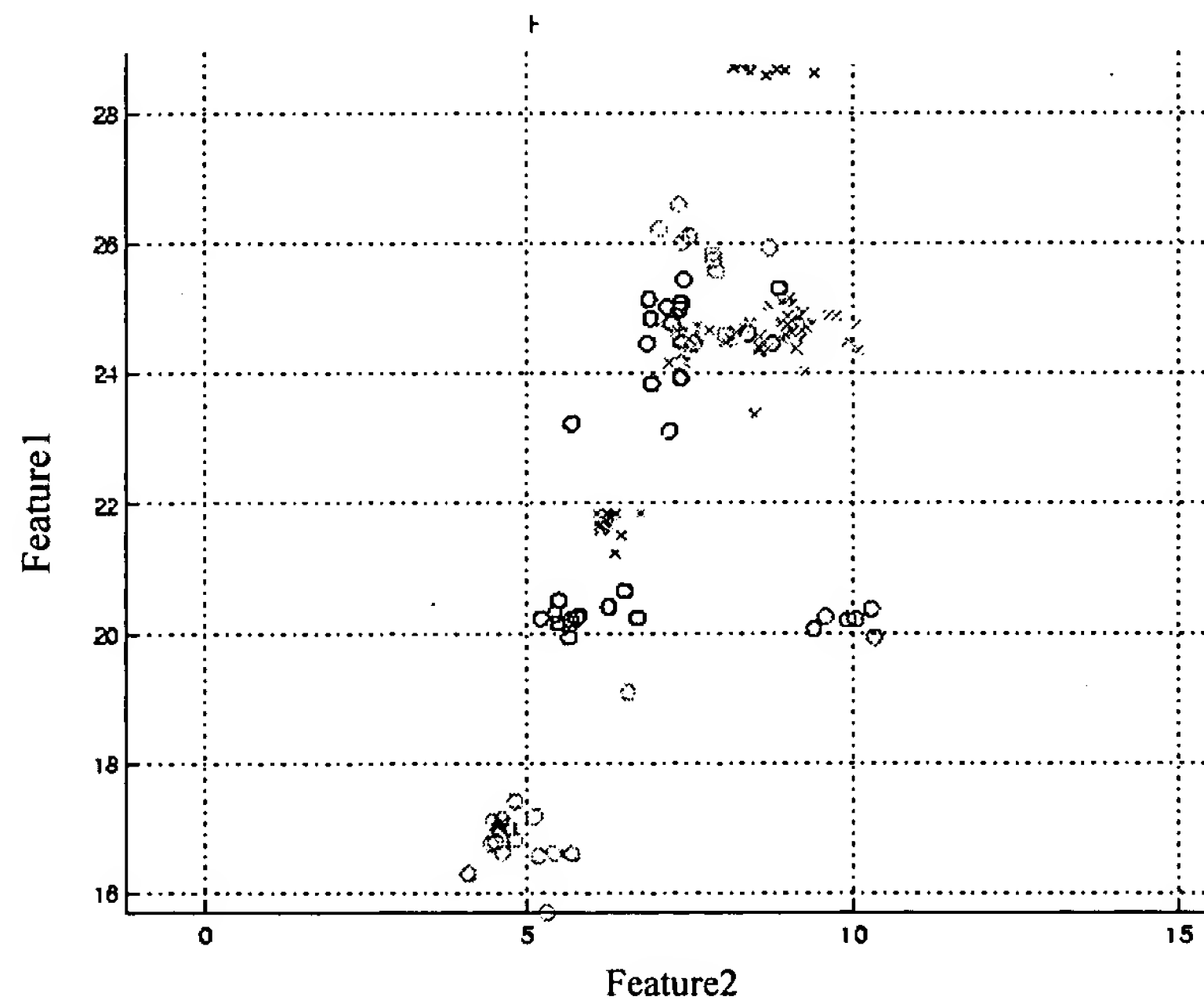


Figure 16: Feature1 and Feature2 clusters created by plotting the average of every valid value extracted as the object traversed the field of view.

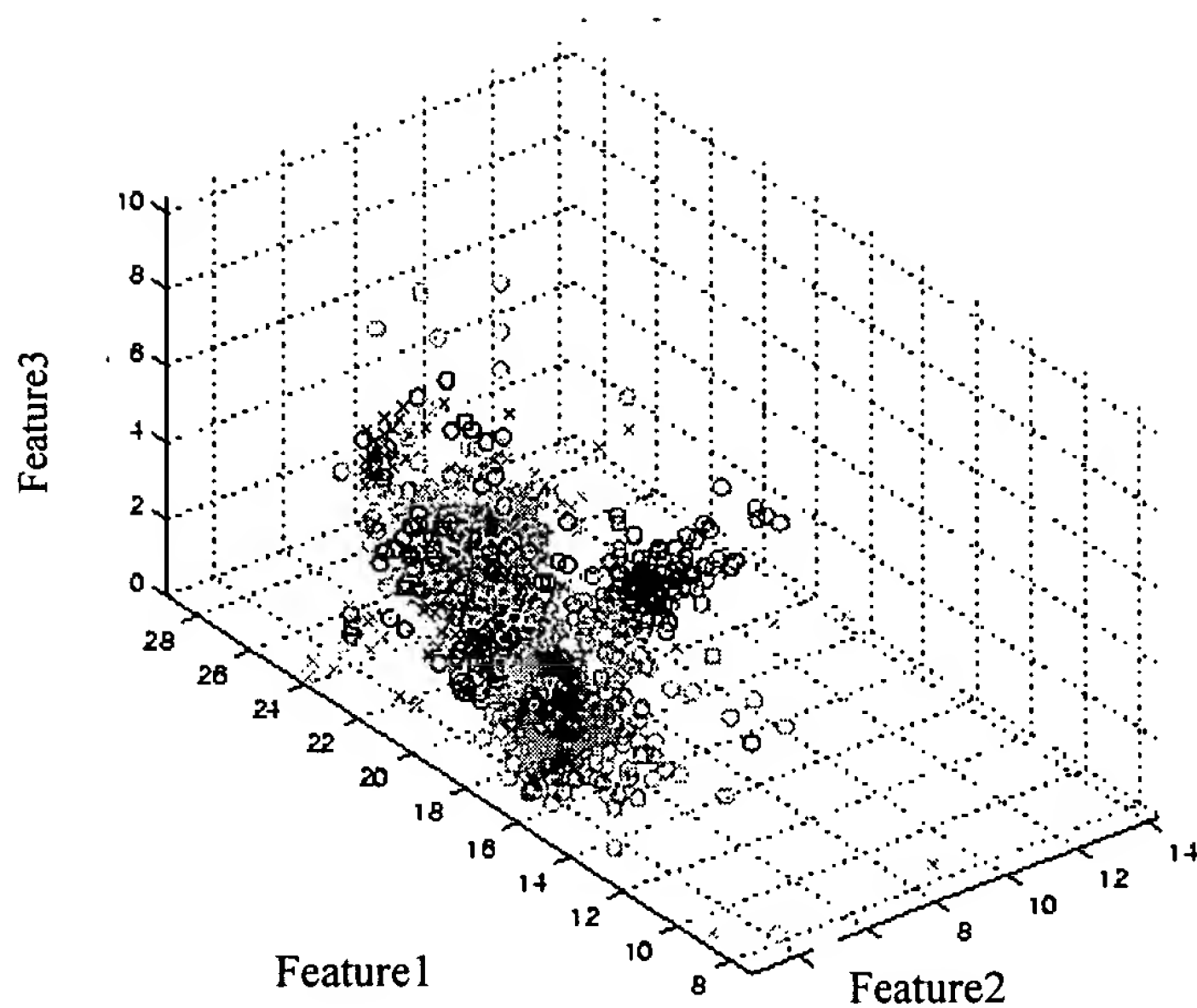


Figure 17: Feature3, Feature1, and Feature2 clusters created by plotting every valid value extracted from each frame.

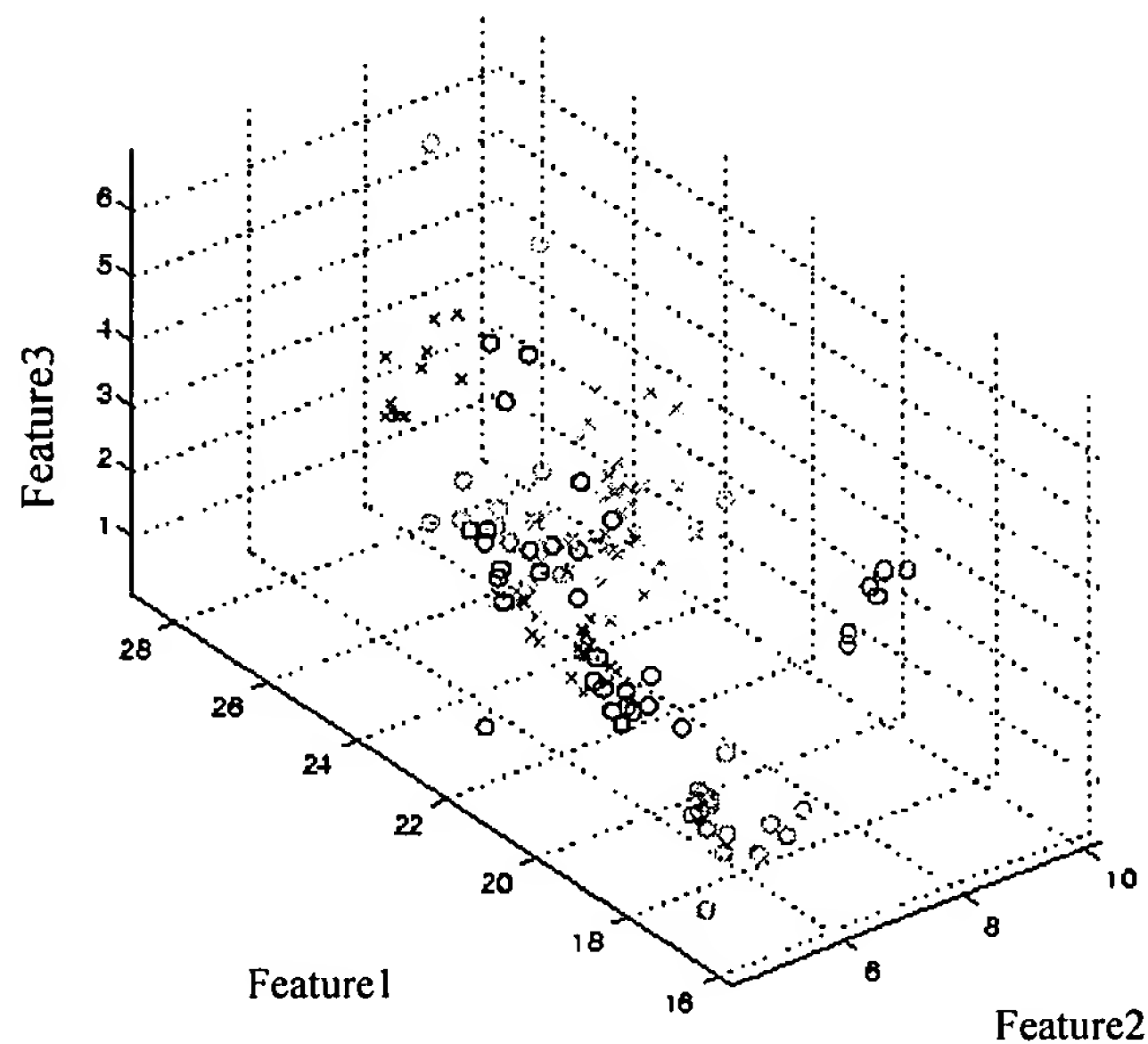


Figure 18: Feature3, Feature1, and Feature2 clusters created by plotting the average of every valid value extracted as the object traversed the field of view.

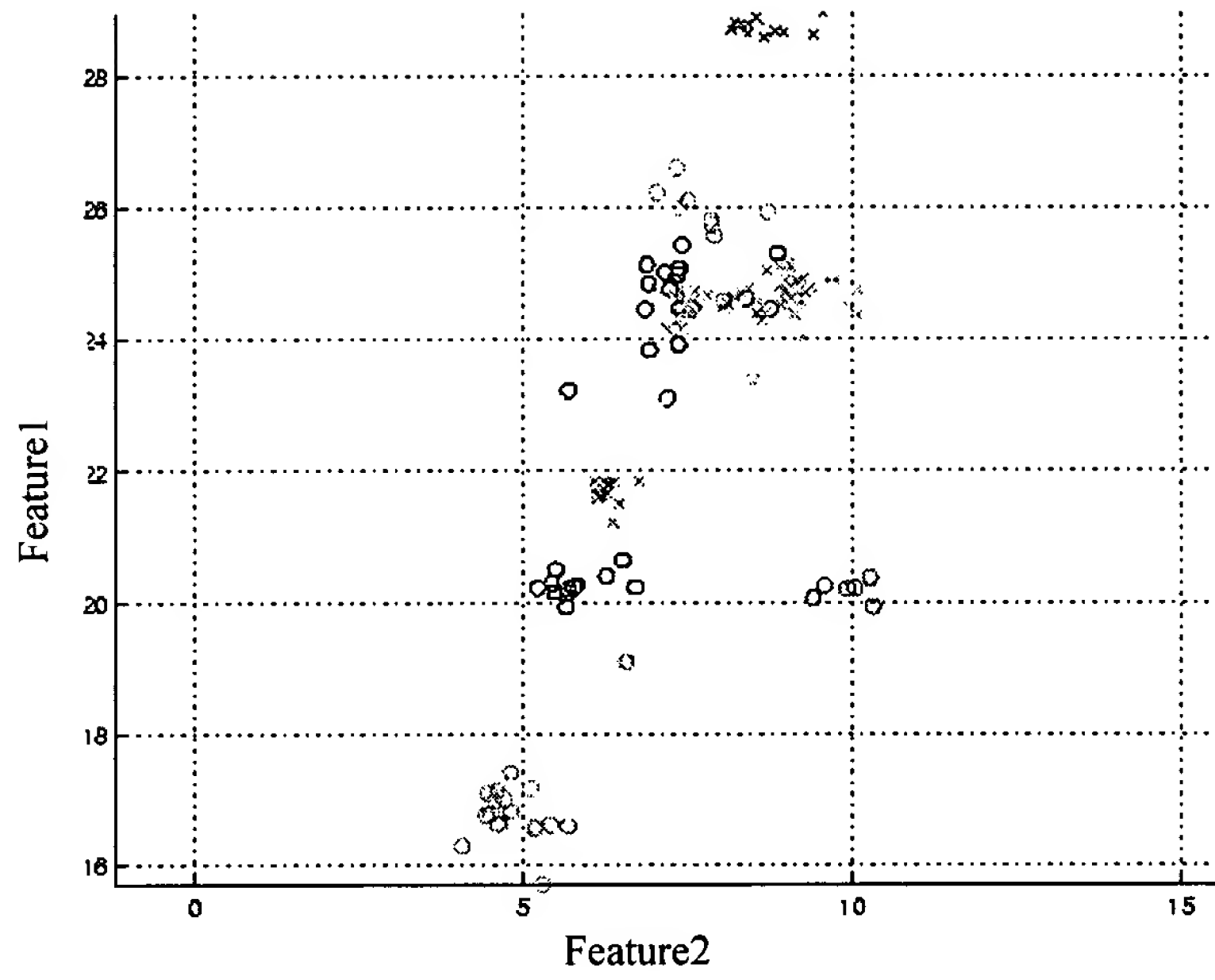


Figure 19: Normalized clusters for Feature1 and Feature2 in combination.

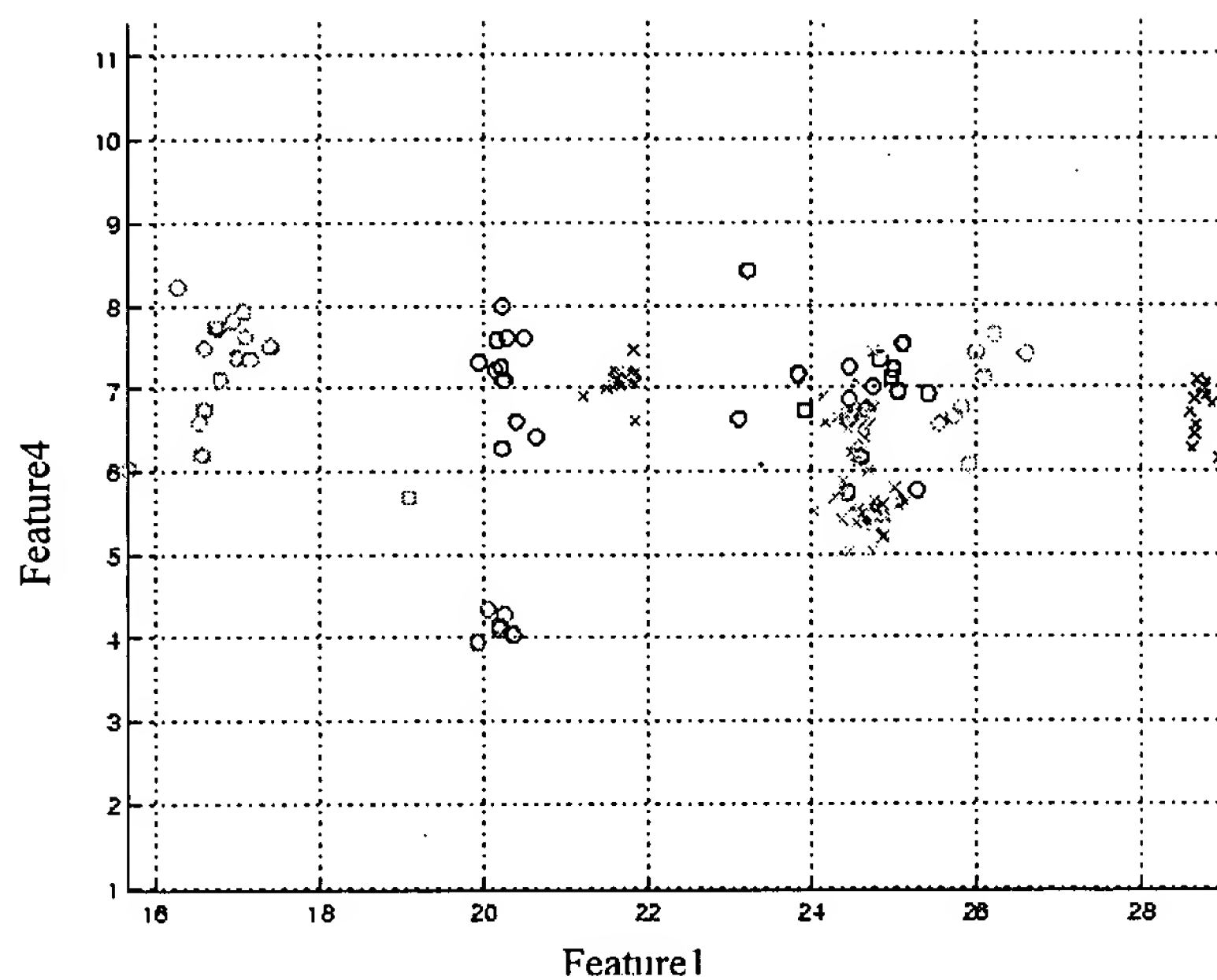


Figure 20: Normalized clusters for Feature4 and Feature1 in combination.

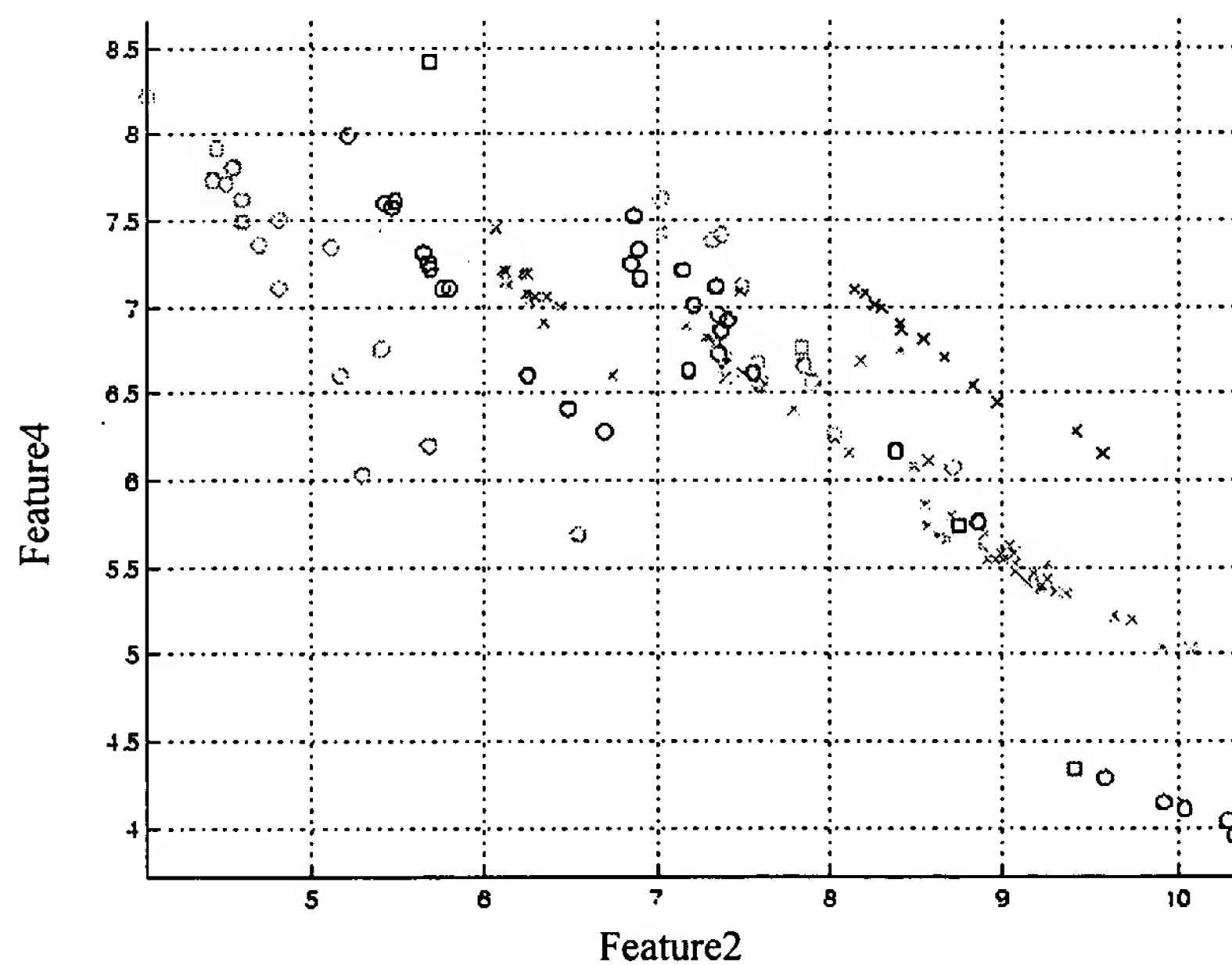


Figure 21: Normalized clusters for Feature4 and Feature2 in combination.

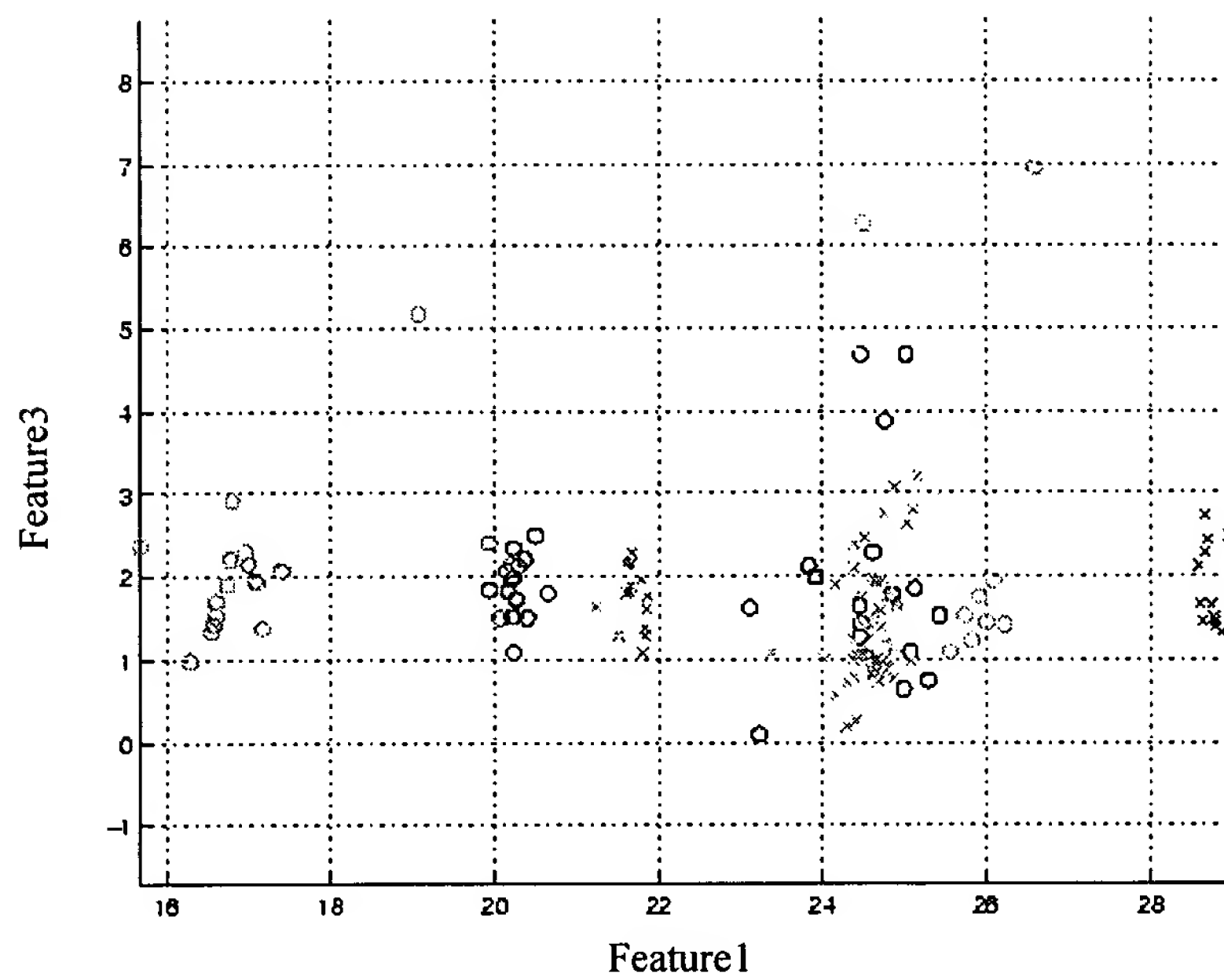


Figure 22: Normalized clusters plots for Feature3 and Feature1.

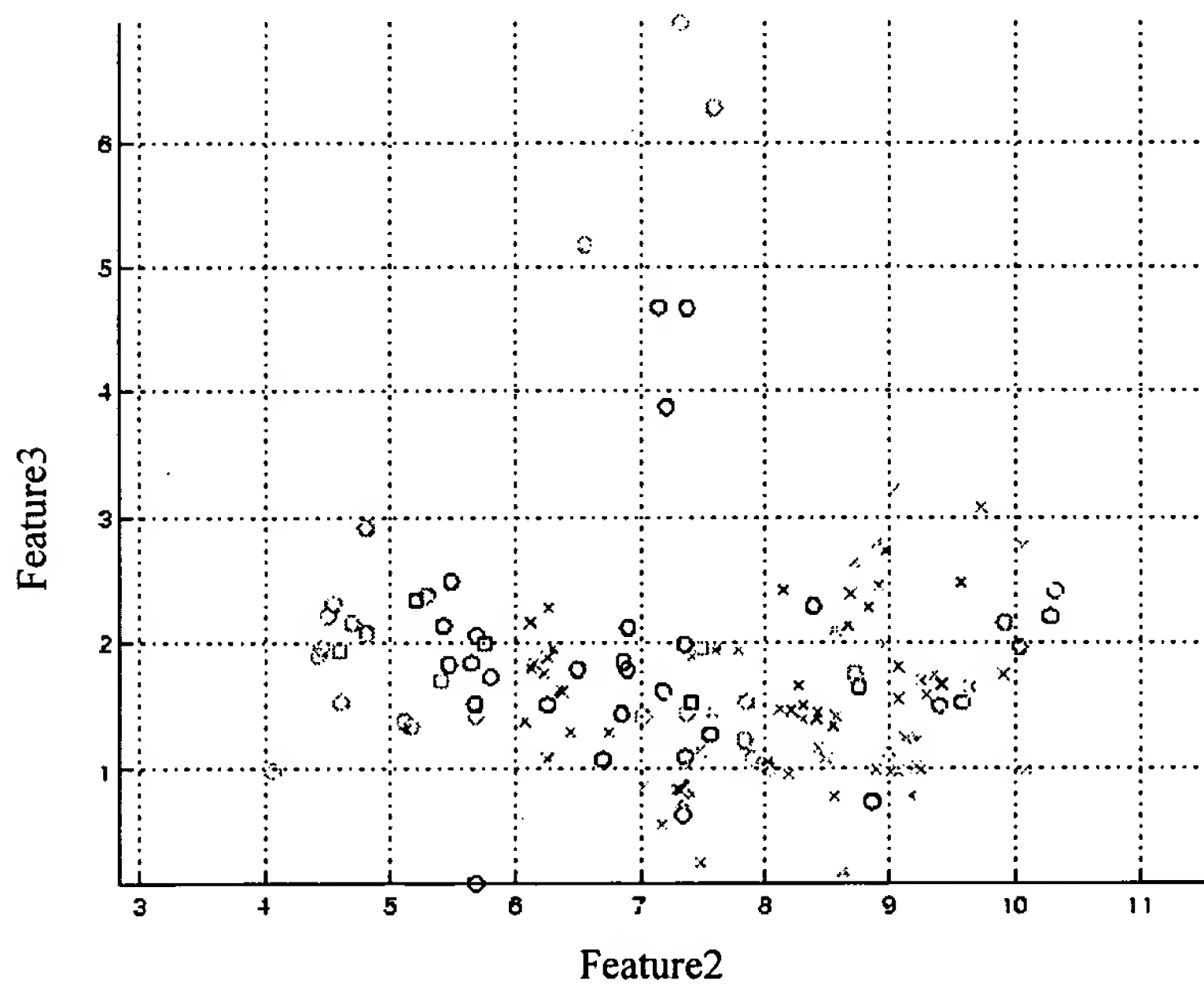


Figure 23: Normalized clusters for Feature3 and Feature2.

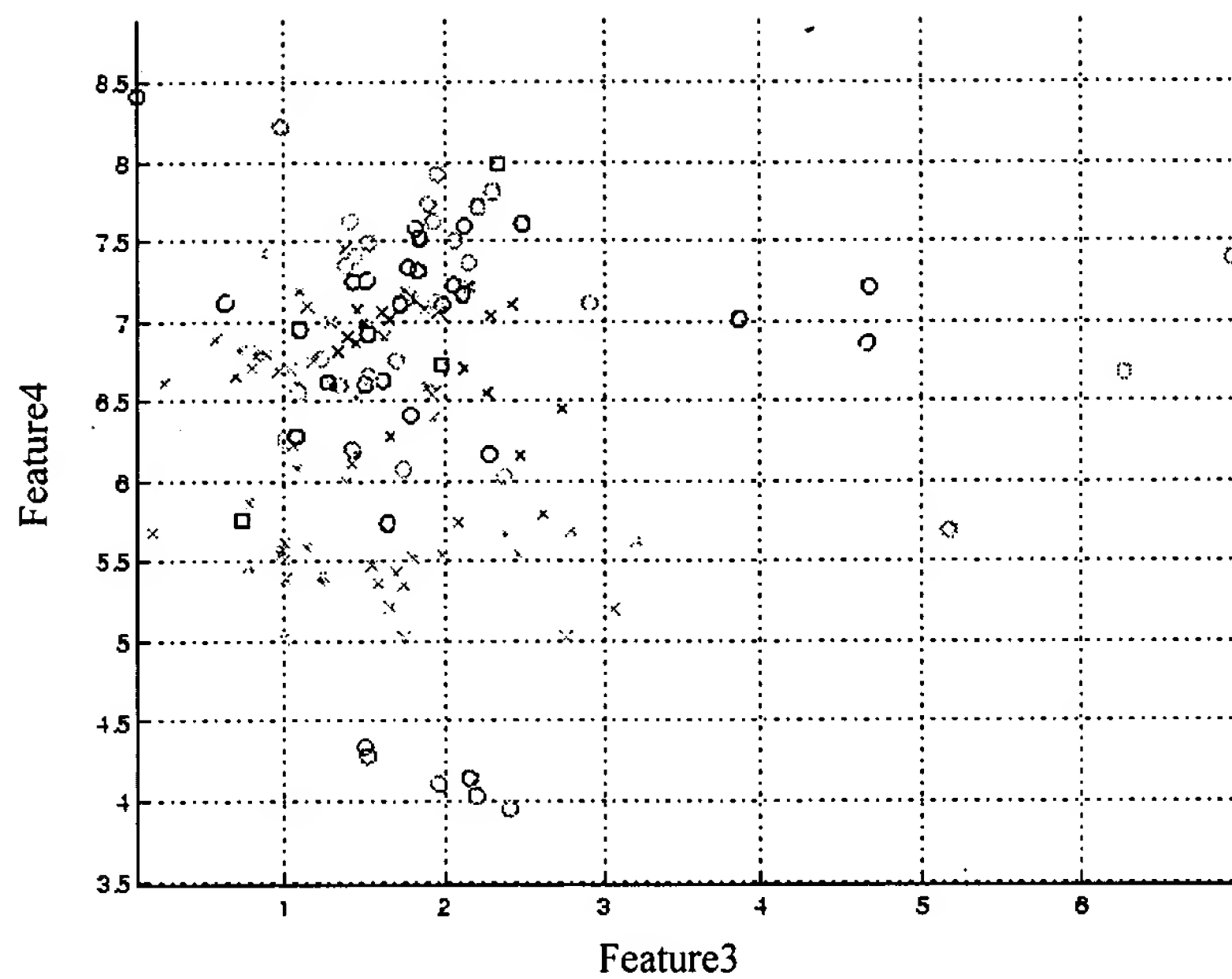


Figure 24: Normalized clusters for Feature4 and Feature3.

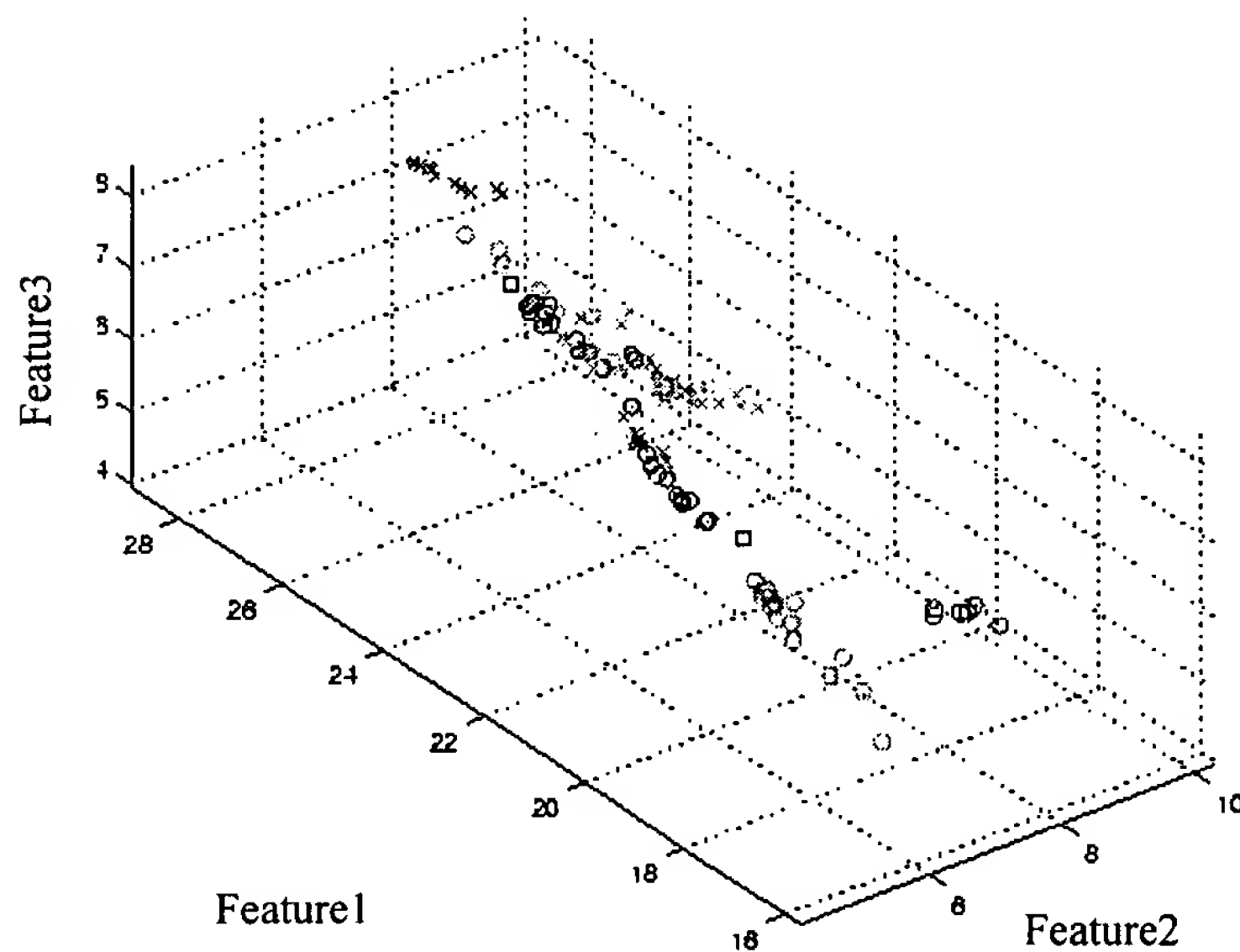


Figure 25: Normalized clusters for Feature4, Feature1, and Feature2.

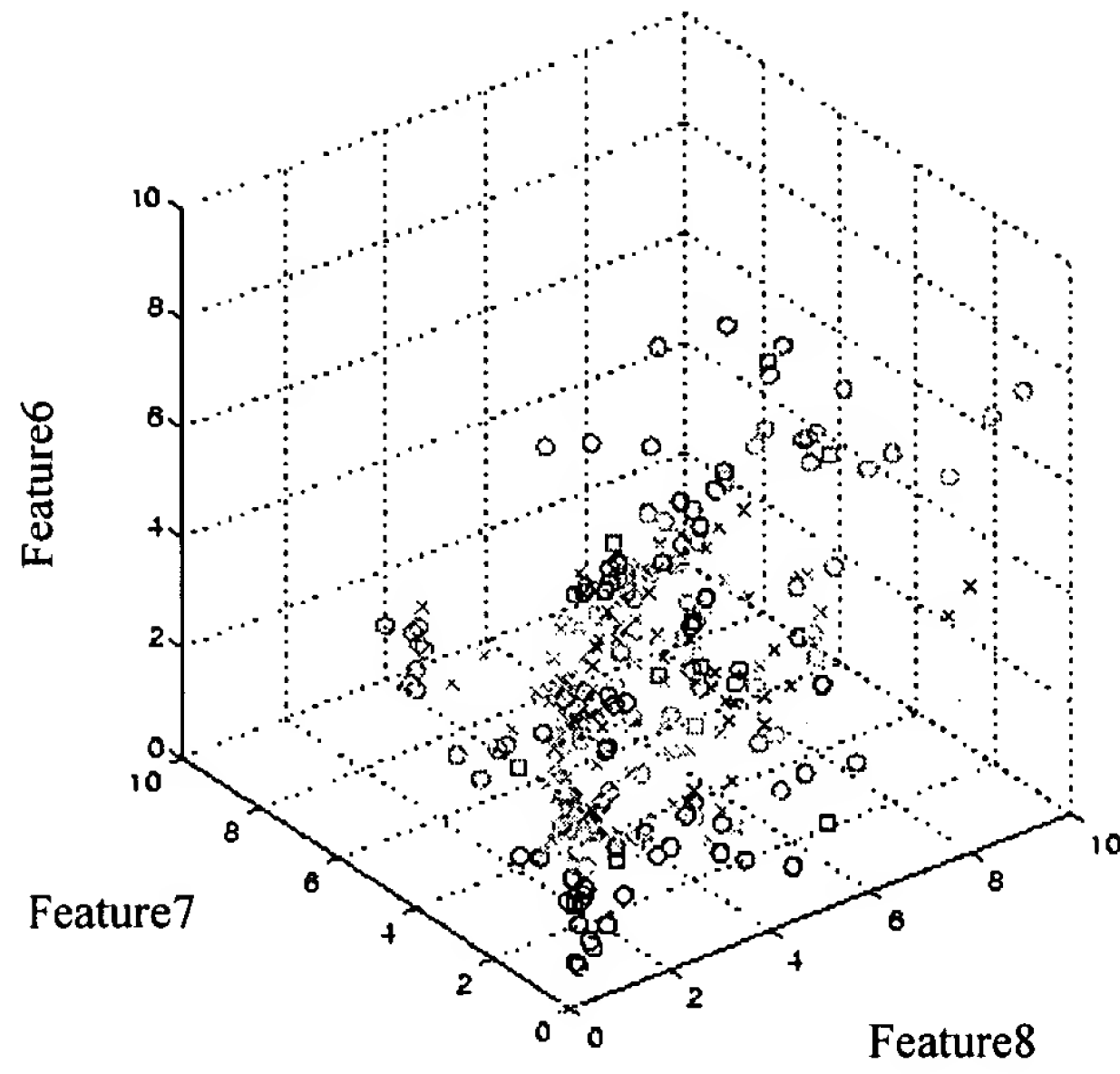


Figure 26: Distances from a given object using Feature6, Feature7, and Feature8.

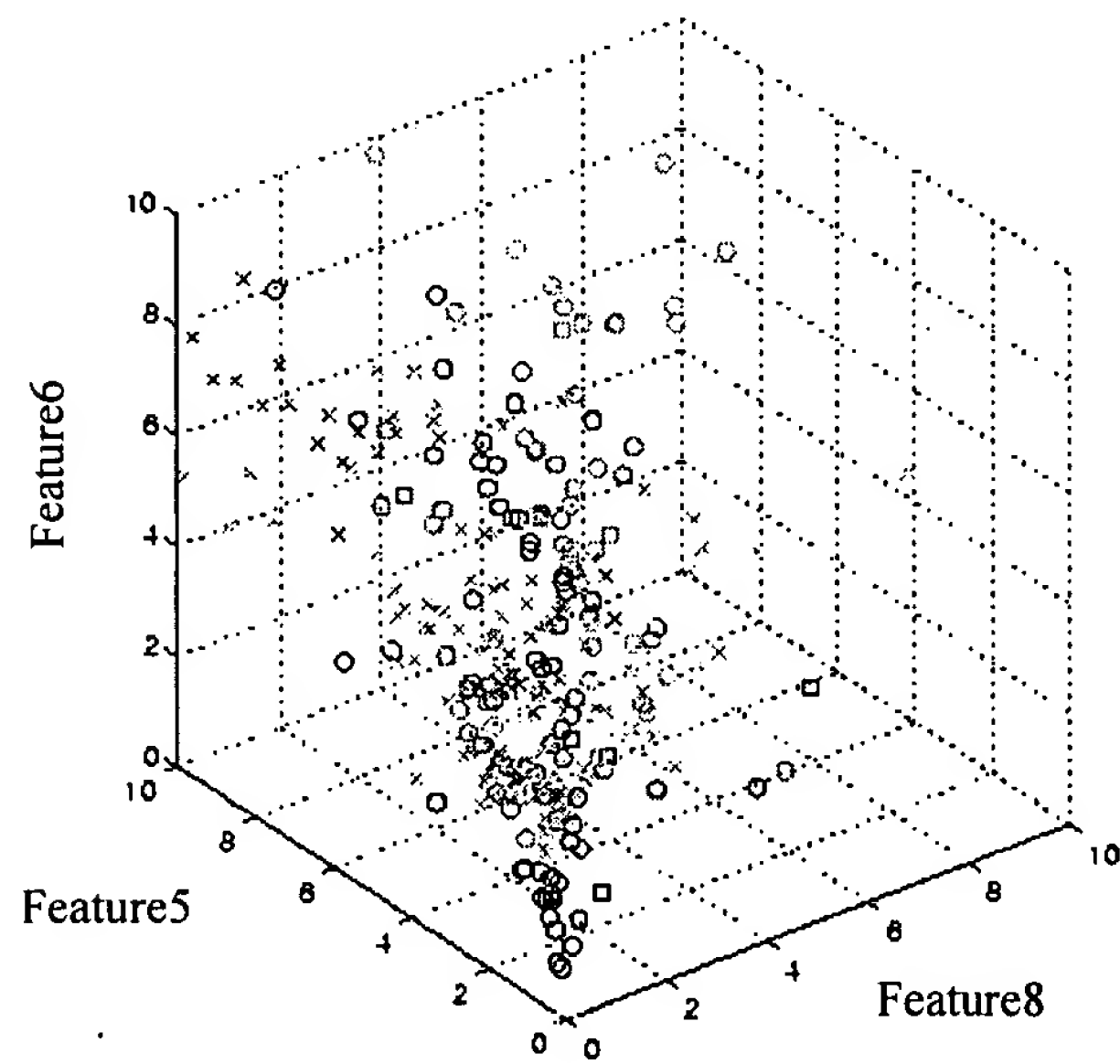


Figure 27: Distances from a given object using Feature6, Feature5, and Feature8.

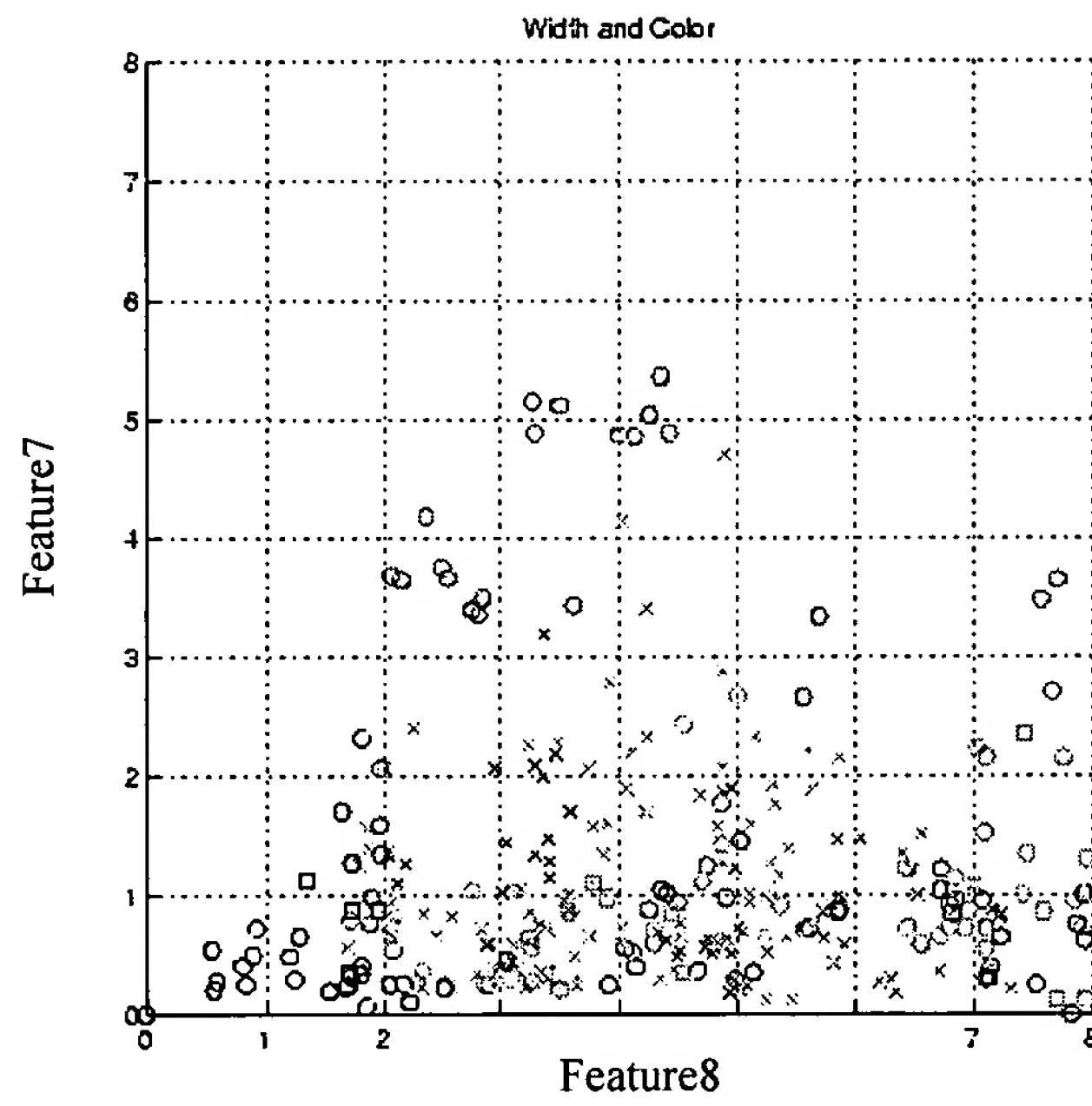


Figure 28: Distances from a given object using Feature7 and Feature8.

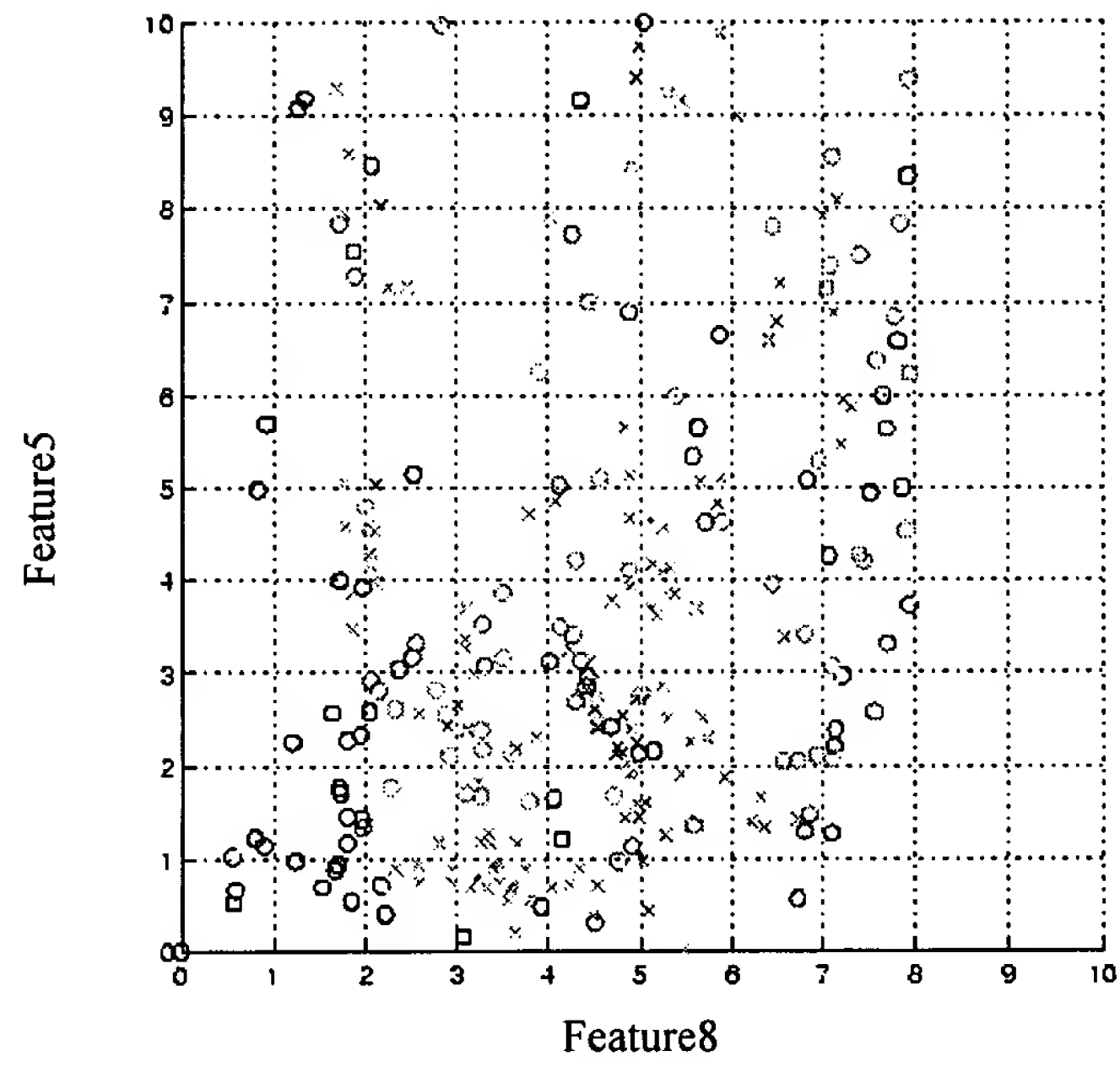


Figure 29: Distances from a given object using Feature5 and Feature8.

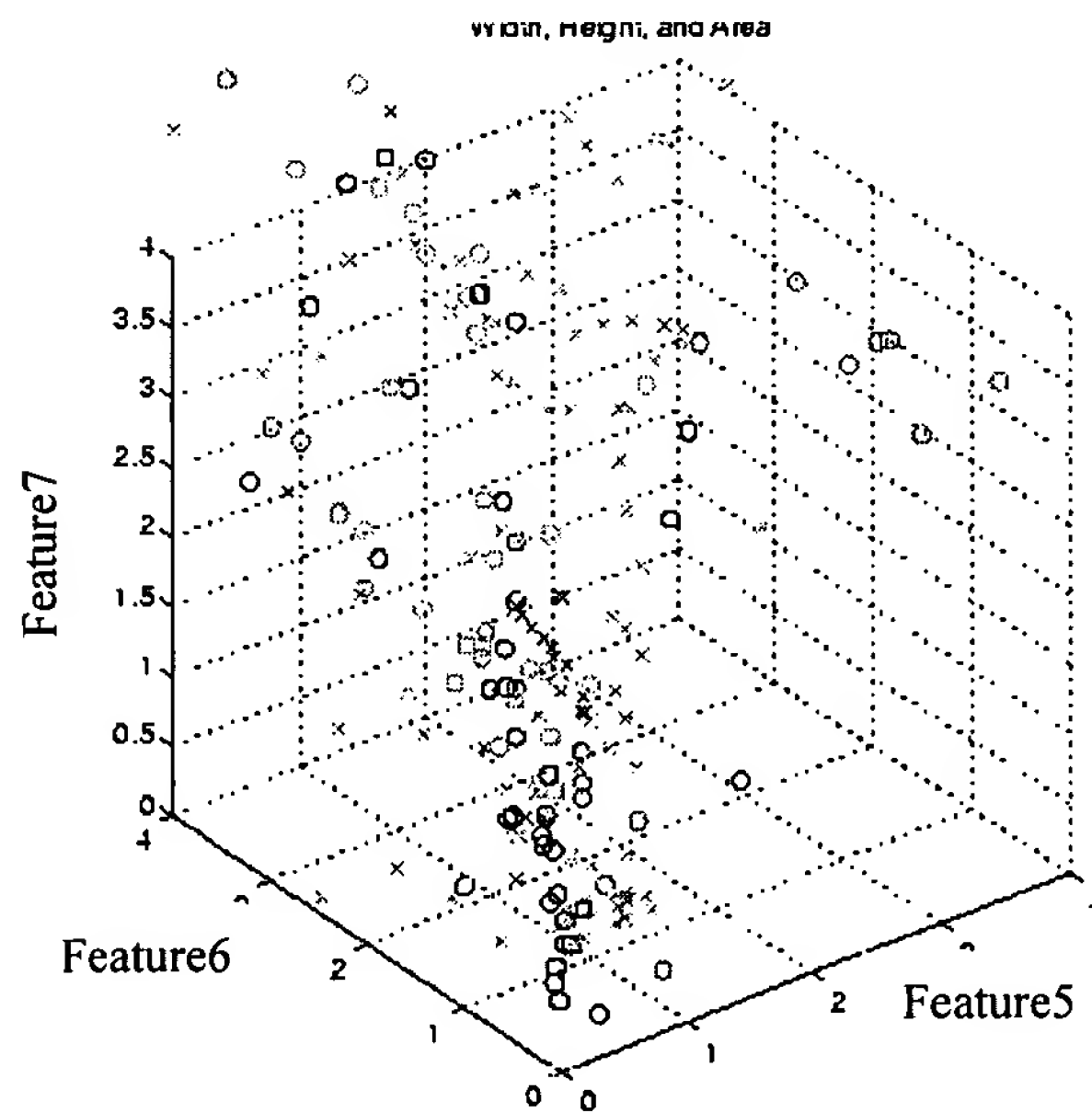


Figure 30: Distances from a given object using Feature7, Feature6, and Feature5..

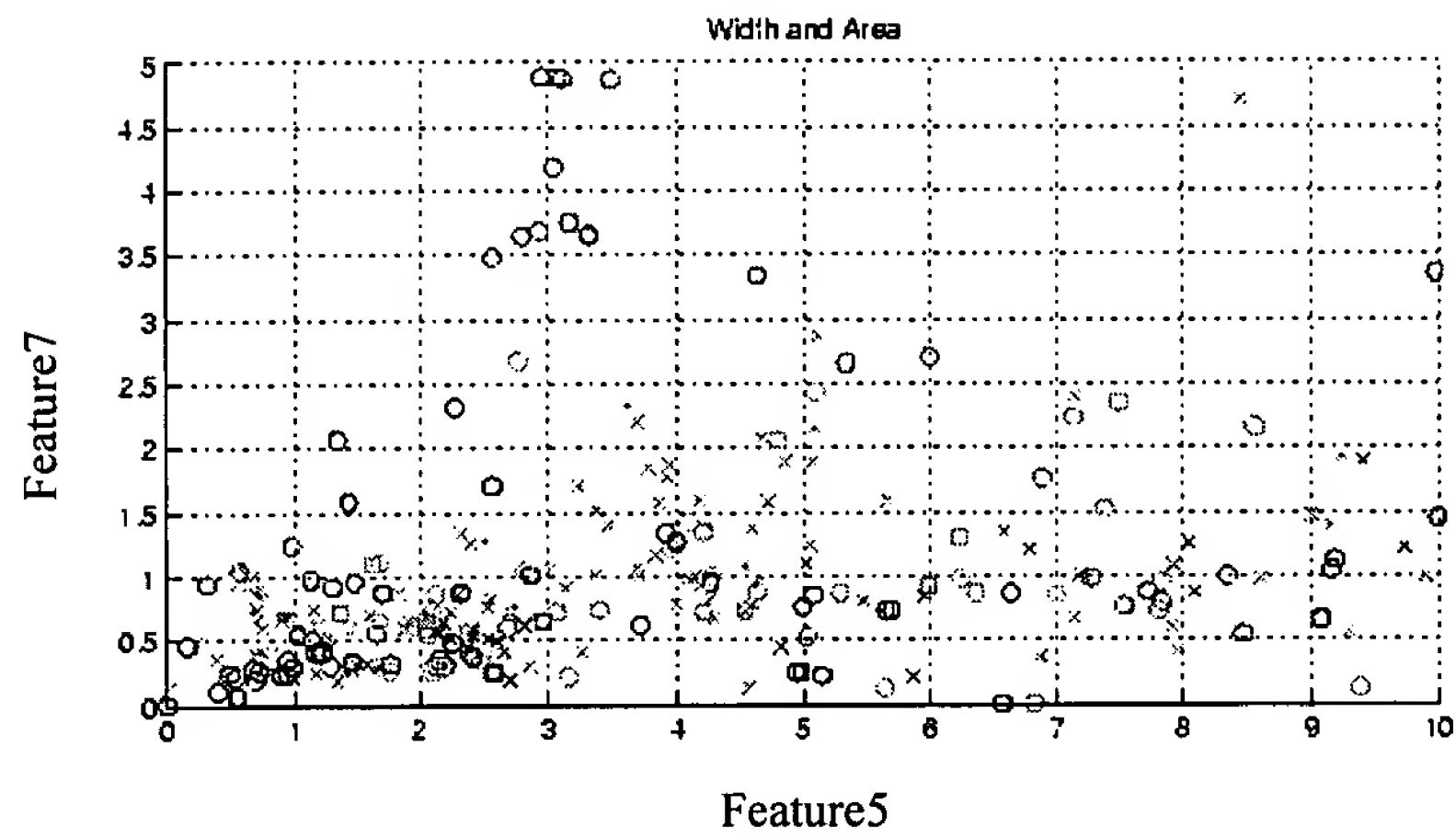


Figure 31: Distances from a given object using Feature7 and Feature5.

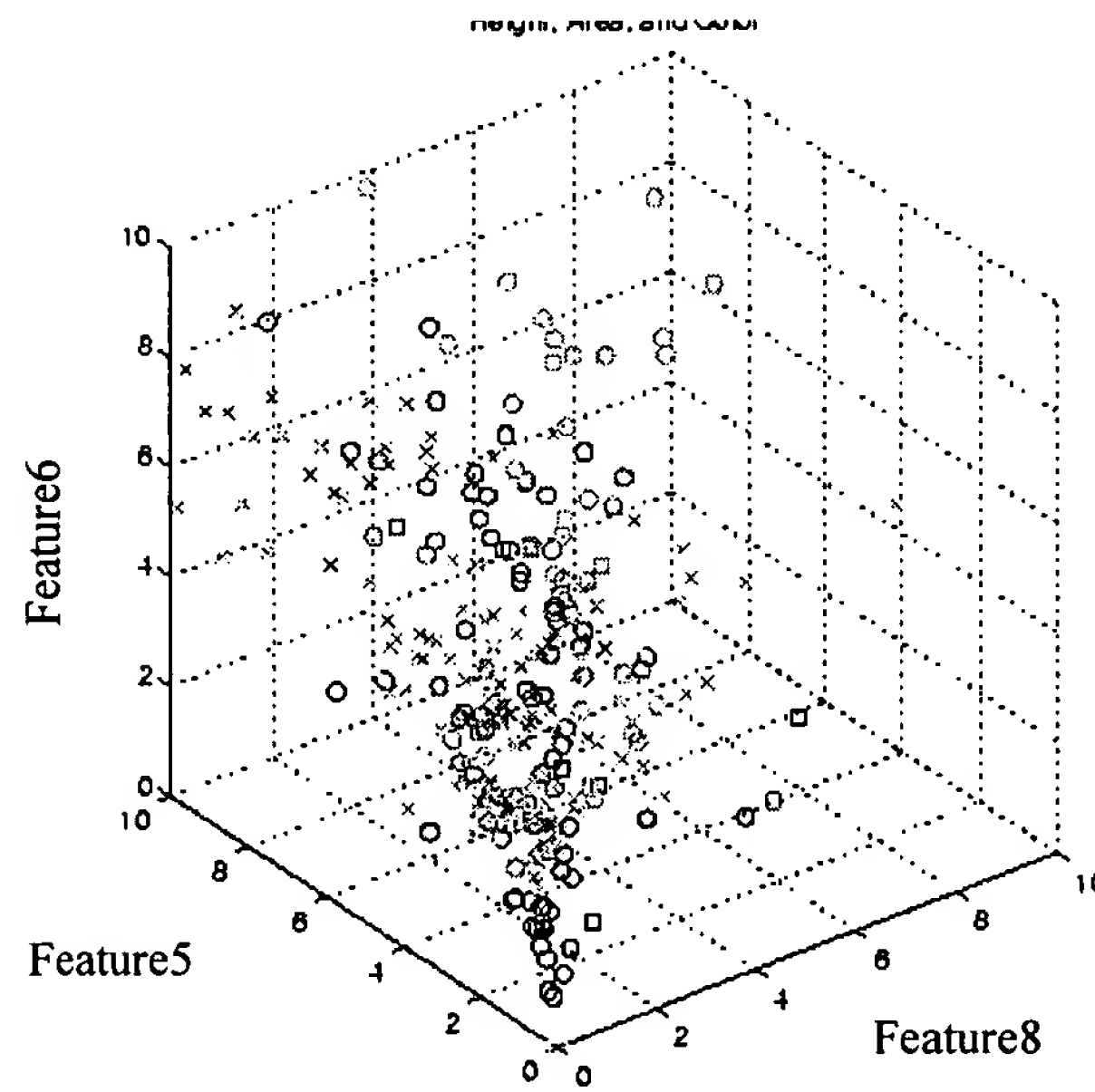


Figure 32: Distances from a given object using Feature6, Feature5, and Feature8.

Figure 33: Distances from a given object using Feature6 and Feature8.

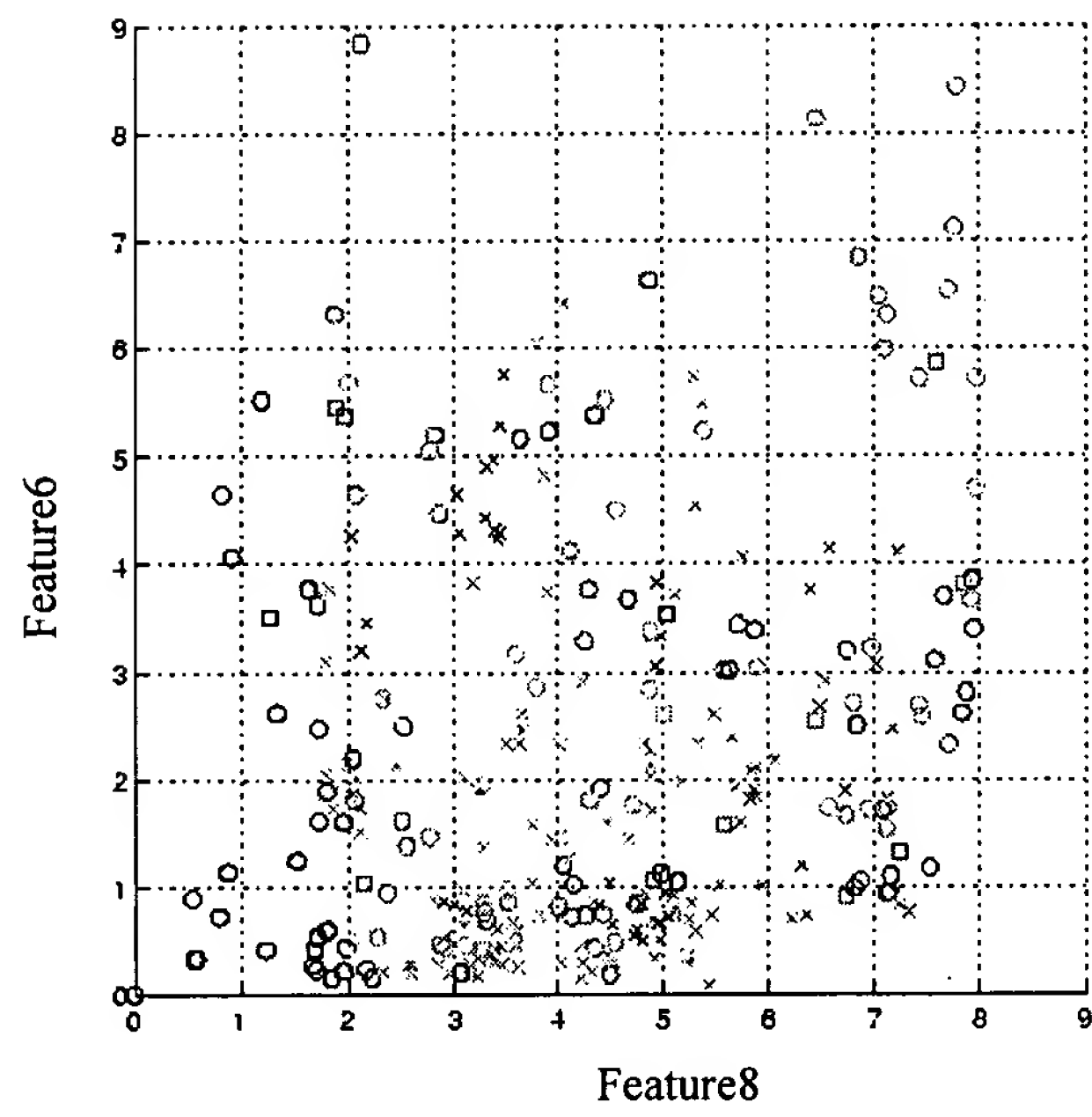


Figure 33: Distances from a given object using Feature6 and Feature8.

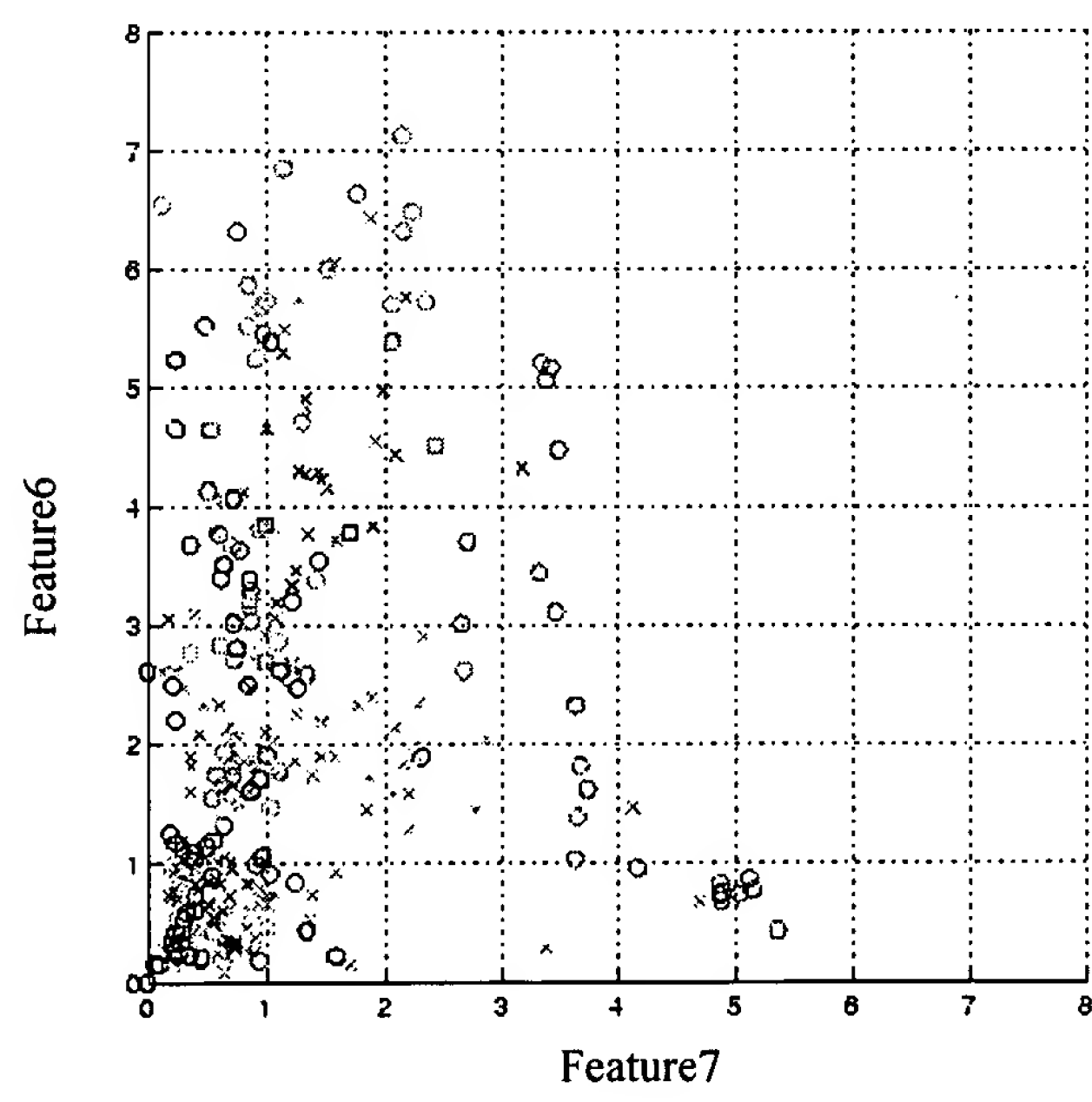


Figure 34: Distances from a given object using Feature6 and Feature7.

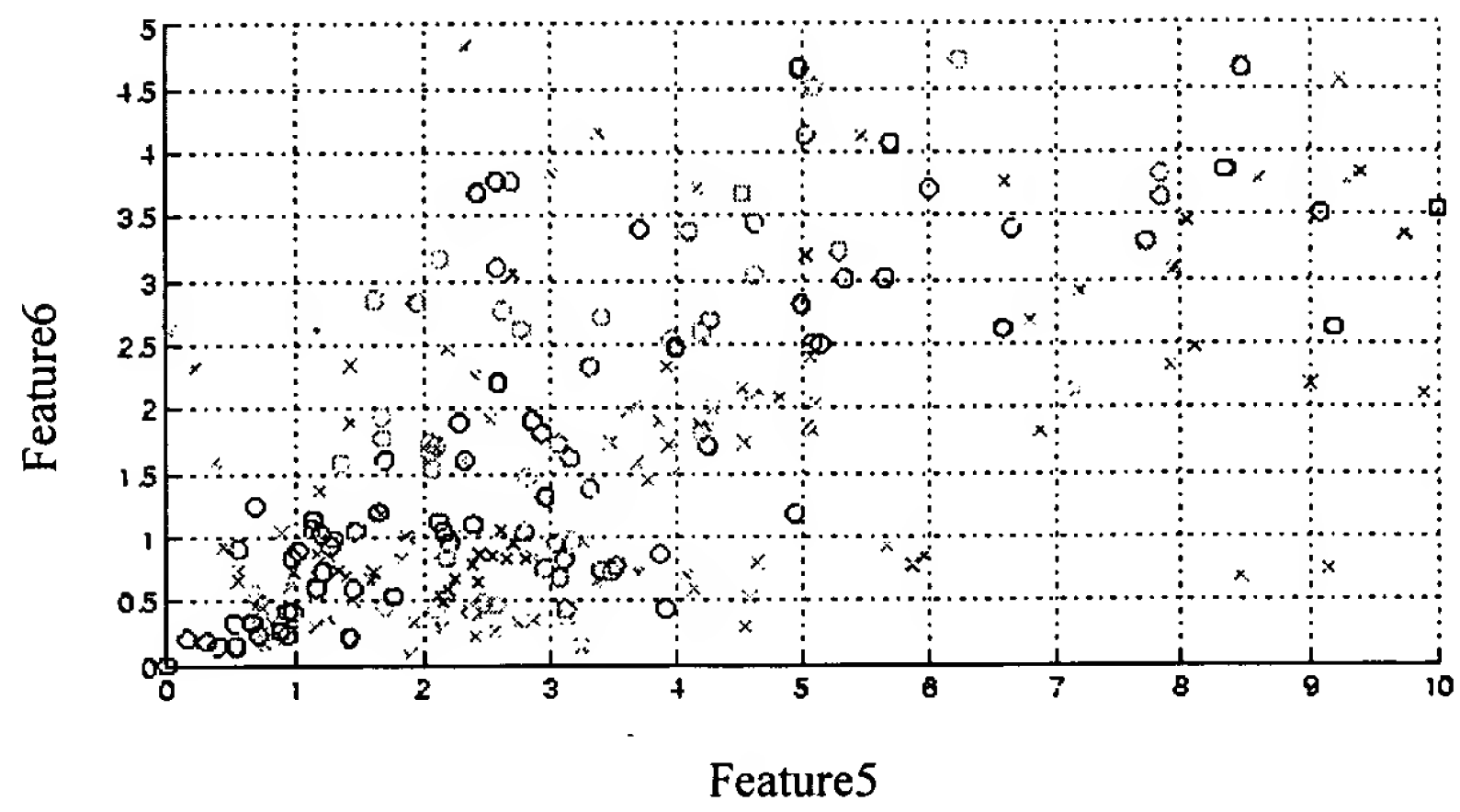


Figure 35: Distances from a given object using Feature6 and Feature5